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MODERATE-INCOME, FEDERALLY-ASSISTED HOUSING
DEVELOPMENTS.

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COMMUNITY BY DESIGN

A STUDY OF MODERATE-INCOME, FEDERALLY-ASSISTED
HOUSING DEVELOPMENTS

BY

KAREN A. FRANCK

A dissertation submitted to the Graduate
Faculty in Psychology in partial fulfillment
of the requirements for the degree of Doctor
of Philosophy, The City University of New York.

1978

This manuscript has been read and accepted for the Graduate Faculty in Psychology in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

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INTRODUCTION

In many ways a housing development is a community by definition, before it is inhabited or even built. Its architectural uniformity and clear boundaries fulfill one of the traditional criteria for the existence of local community: a territorial unit delimited by observable boundaries (Keller, 1973; Hillery, 1955). A housing development also has a predetermined name, which unifies it in much the same way its architectural uniformity does and fulfills another criterion that has been used to judge whether a local area is a community (Ross, 1974; Hunter, 1974, 1975). And, finally, a housing development, particularly one built with federal subsidies, possesses an image or identity based in part on the sponsoring group's objective in building it and on the particular housing program under which it is financed. This determines to a large extent which economic and racial groups and which family types will live there.

Beyond these predetermined characteristics, which all federally-subsidized housing developments possess, there is wide variation in the degree to which these sites manifest the kinds of human activities and attitudes that are commonly associated with the concept of community. It is the objective of this research to study this variation: to examine the different ways in which the physical, social, and organizational characteristics of such developments encourage or discourage various forms of community activity and community sentiment on the part of residents.

"Community by design," therefore, refers to two assumptions: 1) that federally-assisted housing developments are to some extent communities by definition; and 2) that physical design, in combination with other site characteristics, affects the nature of community life in these environments.

People's activities and sentiments are related to each other and to characteristics of the physical and social setting in many complex ways in residential environments as in other settings. Also, no single characteristic of the setting can be considered to act alone but only in concert with many other characteristics. In order to do theoretical justice to this complexity and, at the same time, to reduce it to a manageable form for analyzing data and interpreting results, a multi-stage, multivariate theoretical model was developed as part of this research.

The model developed, shown in general form in Figure 1, illustrates the major working assumptions of this study: 1) that relatively enduring site characteristics of housing developments either facilitate or discourage various community activities that, in turn, either facilitate or discourage various community sentiments; 2) that these site characteristics affect activities and sentiments directly as well as via other variables; and 3) that a number of additional community attributes and perceptions enter into this process. The research objective is to establish which of the many relationships suggested by the model are supported by the findings. In this way the study can begin to demonstrate how the physical and social characteristics of a certain

type of residential environment influence people's activities in and their feelings about that setting.

At this point, the model is presented in general terms only in order to give an overview of the purpose and scope of the study. The concepts and variables involved in the model are developed in Chapters 1 and 2. The details of the model and its underlying assumptions are described at the end of Chapter 2.

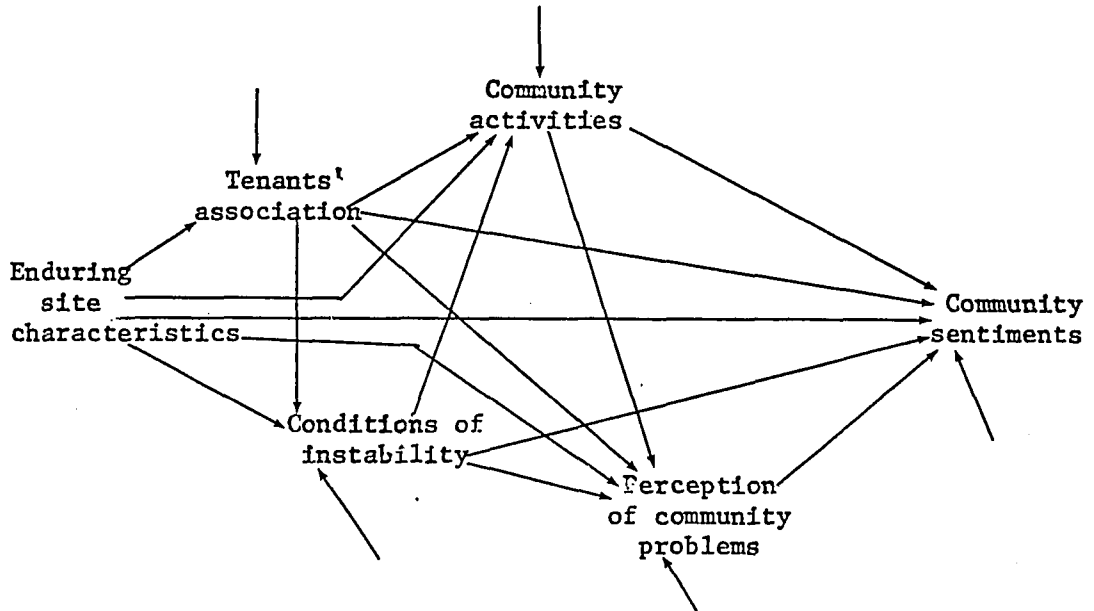


Figure 1

General Theoretical Model of
Community Activities and Sentiments

This study draws largely upon the ideas and findings from two different areas of recent research. The first area consists of ideas, findings, and design guidelines about federally-assisted housing developments (Cooper, 1970, 1972, 1975; Newman, 1972, 1973, 1976). This body of work suggested a particular physical design feature of planned residential environments, the number of apartments grouped together, that is likely to affect a wide variety of conditions, activities, and perceptions. The work of Cooper and Newman also suggested a number of such conditions, activities, and perceptions, as well as a number of other site characteristics, that should be considered when one is studying such environments.

Both Cooper and Newman are concerned with the ways in which the physical design of the residential environment and other features affect a variety of activities and attitudes on the part of residents; several of the activities and attitudes they refer to are often associated with the concept of community. Neither Cooper nor Newman, however, has developed explicit definitions of the concepts or variables they refer to nor has either one developed a theoretical model of the relationships they describe. Finally, their concern with community is for the most part implicit but, in my opinion, nonetheless apparent. For these reasons, among others, I have not designed a study that is intended to be a test of their ideas. I have, instead, interpreted and incorporated their ideas and findings in ways that are useful in meeting the research objective of this study.

The second area consists of recent studies and writings about urban neighborhoods (Suttles, 1968, 1972;

Kasarda and Janowitz, 1975; Hunter, 1974, 1975). I have drawn on this body of work for a way of viewing and studying community as a multi-dimensional phenomenon. Rather than asking whether or not a few, presumably essential, ingredients of community are present and therefore whether or not a particular area is a community, these authors explore what pattern of elements is present, in what degree, and in what combinations. This body of work also suggested a number of fairly well-defined community activities and sentiments that could be examined in studying housing developments. Finally, the work of Hunter (1975) and Kasarda and Janowitz (1975) provided examples and precedents for studying community activities and sentiments with the aid of a theoretical causal model. These authors are not, however, concerned with the effects of the physical environment. Also their studies are predominantly of urban neighborhoods, not housing developments (with the exception of Suttles, 1968). And, in the case of the causal models employed by Hunter and Kasarda and Janowitz, the unit of analysis is the individual household rather than the setting as a whole, as it is in this study. Despite these differences, this area of research, combined with the work of Cooper and Newman, has contributed significantly to the theoretical and empirical framework of this study.

The sites for this research consist of 35 moderate-income, federally-assisted housing developments in Newark, St. Louis, and San Francisco, which are composed of row house, walk-up, and high-rise buildings. Those developments composed of two building types are broken down into two sites according to building type so the total number of sites in the analysis is 43. Built under Section 236 and Section 221 (d)(3) housing

programs and providing further subsidies through various rent supplement programs, these developments house both low- and moderate-income households, most of whom are families with children.

The primary source of data is a household survey conducted with 1615 male and female adult residents. Residents' responses to the questionnaire items were aggregated by housing site in order to obtain the mean level of each activity, sentiment, or perception at each site. Path analysis, based on the results obtained with multiple regression, was used to analyze the direct and indirect effects that enduring site characteristics and intervening variables have on the various types of community activity and sentiment.

Chapter 1 is devoted to a review of the literature on community activities and sentiments. In Chapter 2 the literature is reviewed in terms of the attributes of housing sites, which are treated as either independent or intervening variables in the theoretical model. The model and the assumptions underlying it are presented in detail at the end of Chapter 2. In Chapter 3 the sites, the sample of respondents interviewed, and the sources of data are reviewed. In Chapter 4 the techniques of analysis are described and the construction of indices and summary statistics on all the variables used in the regression are presented. Chapter 5, the first results chapter, presents the findings for each of the model's early stages and focuses on the four types of community activity. Chapter 6 covers the findings for the last two stages of the model and focuses on the four types of community sentiment. A general discussion of the findings is presented in Chapter 7. Implications for further research and for policy are presented in Chapter 8.

CHAPTER 1

COMMUNITY ACTIVITY AND COMMUNITY SENTIMENT: A THEORETICAL PERSPECTIVE

What community is, where it is, and indeed if it exists at all continue to be popular topics for empirical investigation and theoretical discussion in social science. Unfortunately, the two forms of discourse often bear little relationship to each other: studies document the existence of particular elements of community in a geographic area, and yet those believing in the loss of community or its irrelevance in the modern world pay no heed.

In this chapter the highlights of this discourse on the presumed loss of community are briefly reviewed. Then ideas and findings from past research are discussed in relation to the four types of community activity and the four types of community sentiment that are the focus of this study.

Part One: Community is Not Lost

Hillery (1955) classified 94 different definitions of community from sociology and found that most were in agreement on three points: that community consists of (1) persons in social interaction (2) within a geographic area (3) having one or more common ties. This seems to be a reasonable general definition; however, one or two of these points are often used as the ultimate criteria for the existence of community. Also a particular form of social interaction--primary ties--is often deemed crucial.

The Chicago school sociologists considered the presence of close friends and relatives necessary for the existence of community. The supposed weakening of kinship bonds and substitution of anonymous contacts for close friendships in urban settings were equated with the disappearance of local community (Bell, 1968).

In the 1950's several sociologists tested these generalizations about the nature of informal social relations in the city (Axelrod, 1956; Greer, 1956; Bell and Force, 1956), and found little support for them. Bell and Force, for example, studied four San Francisco neighborhoods that varied in socioeconomic status and familism. They concluded that most of the men interviewed, regardless of their particular neighborhood, had fairly frequent informal social contacts. The amount of family life in the neighborhood as a whole appeared to affect the degree of isolation of men from neighbors and kin.

The early studies of public housing projects conducted in the 1950's also revealed a fairly high degree of social interaction among residents (Wilner, Walkley, and Cook, 1950; Jahoda and West, 1951; Merton, 1948), as well as some social solidarity in trying to solve project problems (Jahoda and West, 1951; Merton, 1948).

Despite these studies, Nisbet (1953) described a massive loss of community resulting from urbanization and industrialization. Like the Chicago school Nisbet equated community with primary ties: the loss of the local community seemed to symbolized modern man's detachment from everything and everyone:

Where...are the dislocations and the deprivations that have driven so many men...to the quest for community, to narcotic relief from the sense of isolation and anxiety. They lie in the realm of the small, primarily personal relationships of society--the relationships that mediate directly man and his larger world of economic, moral, and political and religious values...

Behind the growing sense of isolation in society, behind the whole quest for community which infuses so many theoretical and practical areas of contemporary life and thought, lies the growing realization that the traditional primary relationships of men have become functionally irrelevant to any State and economy, meaningless to the moral aspirations of individuals. We are forced to the conclusion that a great deal of the peculiar character of contemporary social actions comes from the efforts of men to find in large scale organizations the values of status and security which were formerly gained in the primary associations of the family, neighborhood, and church (p. 49).

Nevertheless, empirical research continued to document the existence of patterns of informal interaction and primary ties in urban neighborhoods, particularly in slums (Suttles, 1968; Gans, 1962), the strength of sentiment and emotional attachment to the neighborhood (Fried, 1963), and more social solidarity or cohesion than is usually assumed (Suttles, 1968). Some concluded that the local community is particularly important for the poor and the working class who do not have the widely spread network of associations of the middle class (Fried and Gleicher, 1961).

Again, despite this documentation of the importance of the local neighborhood, some writers used the middle class pattern

of friendships and professional associations, which is not as geographically limited as it seems to be for the poor or the working-class, as a basis for arguing that the physical design of a community is no longer important (Webber, 1964). The most recent empirical investigation of the presumed loss of community (Hunter, 1975), however, was conducted in a middle class neighborhood in Rochester, which was partly inhabited by just those professionals who are believed to be most free of attachments to the local geographic area where they live--professors. Hunter, however, demonstrates that over the last 25 years the frequency of informal neighboring has not declined and the sense of community has increased!

Other writers, despite the intervening research, have continued to present Wirth's classic argument that size, density, and heterogeneity lead to anonymous contacts, and in that sense, to a lack of community (Milgram, 1970). Again, the most recent research testing the influence of these variables (Kasarda and Janowitz, 1975) indicates that people in large urban areas tend to have more extensive social ties than those residing in rural communities, particularly with respect to the relative number of acquaintances and memberships in organization. Length of residence, rather than properties of the community, was a crucial factor in social bonds.

There is no question that the degree of anonymity in urban settings can be fatal, as in the famous Kitty Genovese case (Milgram, 1970). Also unquestionably, certain situations or events in a town, a neighborhood, or a society such as the loss of industry in a small town (Homans, 1950), the overwhelming paralysis of

poverty and distrust in a housing project (Yancey, 1973; Rainwater, 1966) can create tremendous disruption, loss of social control, and a breakdown in established patterns of interaction and socializing. The point is that these phenomena deserve to be investigated, as they often have been; and the results deserve to be considered and their meaning understood in the context of the particular study. Each consequence, or circumstance, cannot be said to embody in itself the loss of community, but rather should be viewed as the loss, or even just the change, of a particular dimension or element of community for particular people.

One reason for the apparent lack of consistency, or indeed of any relationship, between the realms of empirical and nonempirical discourse about community is the omission in much of the writing of explicit definitions of community. In a recent exchange in the American Sociological Review Luloff and Wilkinson criticize Hunter's research showing the continued presence of community in a Rochester neighborhood (Hunter, 1975). In replying to their critique, Hunter correctly points out that the Luloff-Wilkinson critique is based primarily on their definition of community which differs from Hunter's. Hunter concludes with the following recommendation:

I think it would be better for us to launch a series of empirical studies of the variety of communal forms and the process of community formation and change rather than to debate the definition of community and then bemoan its predefined demise (1977, p. 829).

Not only do I concur with that recommendation but, in addition, the sites studied here already meet several of the criteria Hunter (1974, 1975) and Hillery (1955) use to define community.

A housing development by definition is a territorial unit, clearly bounded and named; it has an identity that is a function of the designated resident population and the sponsor's objectives in building it; and it is under the control of a manager and a sponsoring board. Also developments usually house a fairly homogeneous population. Thus for reasons of theory as well as of research design the present study does not address itself to the presence or absence of community in urban life but rather explores how different attributes of a particular communal form, federally-assisted housing developments, affect community activities and sentiments.

Part Two: Community Activities

The distinction between activities and sentiments is adopted from Homans (1950): activities refer to what people do whereas sentiments refer to internal states of the body such as emotions, feelings, and attitudes. It is a working assumption of this research that certain site characteristics and conditions of stability either facilitate or discourage various community activities that, in turn, either facilitate or discourage various community sentiments. In addition, the site characteristics and conditions have a direct impact on

sentiments. Four types of community activity are included in the model: friendship-kinship bonds, casual acquaintance, use of shared space, and experience in solving a common problem.

Friendship and Kinship Bonds

As discussed above, the presence of primary ties within the residential area has been used as a criterion for determining whether an area is a community. The presumed absence of such ties has led some to believe that local residential areas are no longer communities and, therefore, their physical design is not important (Webber, 1964, 1970). Research, however, indicates that primary ties do indeed exist in urban neighborhoods (Suttles, 1968; Gans, 1962; Fried, 1963). Moreover, the emphasis placed on primary ties, as opposed to more informal social interaction, seems misplaced (Keller, 1973).

Like social scientists, designers of housing developments have considered friendship bonds an essential element. The Smithsons feel that houses should encourage the growth of these intimate relationships between neighbors. Newman (1972, 1973), on the other hand, places more emphasis on the need for casual interaction and mutual recognition.

In the literature pertinent to this study interaction with close friends and relatives has been studied both as a dependent and as an independent variable. Early studies of friendship patterns in student housing and in public housing focused on the effect of the spatial arrangement of apartments (Caplow and Forman, 1950; Festinger, 1951; Festinger, Schacter and Back, 1950; Merton, 1948) and the effect of integration (Jahoda and West, 1951; Wilner, Walkley and Cook, 1955).

Some of these studies led researchers to the decision that the most important determinant of friendship in a residential area is the degree of economic and racial homogeneity in the population. This led sociologists and planners to advise against mixing racial or income groups (Gans, 1968; Keller, 1966; McFall, 1974) since population heterogeneity would presumably discourage the development of close ties among residents. (Again one notes the importance placed on these ties.)

The number and proportion of close friends and relatives has also been treated as an independent variable: Hunter (1974) and Kasarda and Janowitz (1974) have demonstrated strong positive relationships between these variables and sense of attachment to the community.

In this study, rather than making primary ties the most important community activity, the number of close friends and relatives in the development and the frequency of interaction with them are treated together as one of several forms of community activity. Moreover, the effect of physical design and population homogeneity on friendship-kinship bonds, as well as the effects these bonds have on attachment and other forms of sentiment, are treated as empirical questions. Finally, the role of primary ties is examined separately from the role of casual acquaintance among residents.

Acquaintance

The importance given to friendship-kinship bonds reflects a confusion in the literature between the role of friend or relative and that of neighbor. Keller (1973) states:

...ignoring the conceptual distinction between friend and neighbor has led to the unwarranted inferences about the alienation of modern urban man and to unwarranted idealization of the friendly neighbors in small towns and villages (p. 190).

If one's close friends do live in the area, they still may not be one's immediate neighbors. Furthermore, it isn't necessary that one's neighbors be close friends to feel part of a local community. Once a distinction has been made between friendship kinship and neighborly relations, the question arises as to what the latter entails. In this study, neighborly relations are divided into two: acquaintance is a type of community activity while sense of responsibility, that is, the feeling that one can depend on other residents in threatening situations, is a type of community sentiment.

It is my feeling that some minimum level of acquaintance is necessary for residents to feel a sense of responsibility for each other and the development; Newman (1973, 1976) and Cooper, Day, and Levine (1972) hold similar views. What Newman envisions and what he describes as current in functional urban communities is not detailed personal knowledge, but rather casual acquaintance developed through observations and encounters:

One can speculate that the presence of a small vestibule... allowed for the development of a uniquely urban friendship pattern. It was possible to meet one's neighbors in the vestibule, to engage in light social chatter, but to resist the closeness and intimacy necessary to invite a neighbor into one's home (1972, p. 18).

Cooper, Day, and Levine use knowledge of other residents as their major criterion for sense of community. But they do not distinguish clearly between knowledge in terms of friendship and knowledge in terms of casual interaction, as I am attempting to do.

Informal interaction is characteristic of several urban neighborhoods and developments studied (Nohara, 1968; Bell, 1968; Greer, 1956; Axelrod, 1956; Kohn, Franck and Fox, 1975; Cooper, 1972, 1975). Indeed, in one longitudinal study of a Rochester neighborhood Hunter (1975) found that two of the six items in his neighboring index showed significant increases over time: exchanging things and having joint parties or picnics.

Measures of acquaintance have included: chatting with neighbors, number of neighbors known by name, doing small favors, visiting each other, going places together. (See Hunter, 1974; Nohara, 1968; Kohn, Franck, and Fox, 1975; Kasarda and Janowitz, 1975). Some measures reflect the traditional confusion between friend and neighbor: visiting each other and going places together seem to be activities pursued by friends, whereas chatting or depending on each other for favors reflect more of a neighborly relationship. In this study, acquaintance between residents is measured by: frequency of casual conversations, number of families in which one adult is known by name, and number of families who can be counted on in an emergency.

Use of Shared Space

Use of facilities and shared space reflects the functional or sustenance dimension of community. People come together in the acts

of fulfilling certain functional or recreational needs and it is often held that this joint pursuit of activities is how community begins (Reiss, 1970). However, urban neighborhoods reveal a decline in the use of local facilities, partly because groceries, theaters, and banks have moved elsewhere. Use of the remaining facilities does not correlate closely with sense of community and only moderately with neighboring (Hunter, 1975; Kasarda and Janowitz, 1975).

Newman (1973) and Cooper (1972, 1975) perceive the use of shared spaces and facilities as a key community activity and the vehicle for stimulating community sentiments. The concern over the design of transition spaces revolves around how those spaces should be used: the common thesis is that these spaces should be designed for more than simple passage. Van Eyck (in Smithson, 1968) wishes to create a gradual transition for children from outdoors to indoors by encouraging vigorous play activity in the corridors. The Smithsons (1960, 1968) want to foster neighborly interaction and children's play in the corridors. Newman (1972, 1973) believes that residents' intensive use of spaces outside the dwelling will lead them to feel a sense of responsibility for maintaining the condition and safety of those spaces. Cooper (1970, 1972) sees the use of semi-private spaces and facilities shared by a small group as allowing people to see each other often and become acquainted in a relaxed way and leading, in the end, to a strong sense of community.

In sum, use of shared space outside the apartment is considered as another type of community activity. Like the other types, it is studied both in terms of how it is affected by physical design and other site characteristics and how, in turn, it affects community sentiment.

Experience in Solving a Common Problem

Participation in local voluntary organizations is another form of community activity which creates a fabric of relationships and commitments. The decline of such participation was used by Nisbet (1953) and Wirth (1957) as further evidence of the loss of community. However, research indicates that this participation is a feature of many urban neighborhoods (Axelrod, 1956; Hunter, 1974, 1975; Kasarda and Janowitz, 1975; Zimmer and Hawley, 1959). In several of these studies the majority of residents interviewed belonged to a local organization. Research also indicates that participation does integrate residents into the local community in that the members tend to report other kinds of community activity and sentiment. Kasarda and Janowitz found that it correlated with interest in local affairs; Hunter (1974, 1975) discovered that the members were more likely to know the name of the local area, to have most of their friends in the area, and to express a sense of attachment to it. In Hunter's Rochester study (1975) membership increased with informal neighboring and with sense of community. Furthermore, informal neighboring and belonging to the community organization were the two variables with the greatest influence on sense of community.

Hunter (1974) discovered that community groups not only operate as mechanisms of social control and integration at the local level

but also help integrate the resident into the wider social structure:

With the increasing scale and scope of collective benefits distributed through increasingly bureaucratized governmental agencies, the federated and hierarchical organizations have come to be a community response on the same level and in the same form. This structure does not portend the decline of the local community, but it points to a reorganization of local structure that serves to integrate residents into both the local community and the city as a whole (p.189).

Thus the significance of participation in organizations lies in the capacity of local organizations to mediate between the individual and bureaucracies like the management or city, state, and federal agencies. The lack of such participation or the loss of such organizations allows managers and private or federal bureaucracies to influence directly large masses of people who have no recourse through mediating groups. This is the vision of mass society presented by theorists like Nisbet (1953) and Kornhauser (1968).

In contrast, local organizations provide residents with a means of achieving community cohesion which represents either agreement or disagreement with decisions made by management and large agencies. On a day-to-day basis participation can give residents the chance to influence the course of events in their communities. Certainly in public housing and moderate-income developments active tenant organizations can have a forceful impact on management.

In this research the residential area studied as a community is the housing development. The one voluntary organization relevant to that type of community is the tenants' association. But since not

all developments have a tenants' association, participation in it is not a variable that applies equally to all the study sites. Also, one can consider the development itself a type of organization; the question then is how to measure participation in such an organization.

These issues were resolved by developing an index of community activity that measures the degree of participation, not in a formal organization, but rather in attempts by residents to solve a common problem in the development. Two questions were used to form such an index: "Since you've been here, have residents ever gotten together to solve a problem that affected everyone?" and "Did you participate?"

It is likely that the existence of a formal organization, a tenants' organization, will have a strong facilitating effect on the degree of this form of participation. The existence of such an organization is therefore included as one of the community attributes affecting this form, as well as the other forms, of community activity. The existence of a tenants' association is not, however, a predetermined or enduring characteristic of housing developments and is therefore treated as an intervening rather than an independent variable in the causal model (See Chapter 2).

Part Three: Community Sentiments

"Sense of community" is a popular phrase in the literature on community but it is used to refer to many different types of sentiment. Cooper, Levine, and Day (1972) refer to the degree of acquaintance among residents and residents' desire to stay in the development as

indicators of sense of community. Hunter (1975) used a "sense of community" index composed of five items measuring "degree of identification of and with the local community." These items measured the affective dimension of attachment, the cognitive dimension (reporting a name and boundaries for the local area), and the dimension of social activities ("district has particular activities for local residents"). Kasarda and Janowitz (1974) measured "sense of community" with one item: "Is there an area around here where you are now living which you would say you belong to, and where you feel at home?" Interest in community was measured by "How interested are you to know what goes on in... (home area)?" And "sorry to leave" was measured by "Supposing that for some reason you had to move away from... (home area), how sorry would you be to leave?"

Rather than adopting one or more items to measure the sense of community I consider several different kinds of community sentiment. Based on the research and ideas of Cooper (1970, 1972, 1975), Newman (1972, 1973, 1976), Hunter (1974, 1975), Suttles (1968, 1972), and Kasarda and Janowitz (1975), four kinds of sentiment are delineated: attachment, responsibility, perceived influence over management, and cohesion.

Attachment

A strong feeling of identification with or attachment to a geographic area has been as much emphasized in discussions of community as have friendship and kinship bonds. Sometimes sense of community is equated with attachment (Kasarda and Janowitz, 1975). This form of

identification with a place is seen as a way of giving the "isolated" modern man some attachment to other people. The Smithsons (1960, 1968) and Van Eyck (in Smithson, 1968) refer to this type of close, nurturing relationship with the physical environment. Van Eyck envisions transition space as providing "A quiet homecoming for all, to sustain a feeling of belonging (Smithson ed., 1968, p. 102)." Newman (1973), however, is more pragmatic and seems to view the sense of responsibility as more important for the viability of a community than the sense of attachment.

The fact that many people no longer are attached to one local area or, in fact, to groups and values that are not associated with physical locations has been used as more evidence that the local community is no longer a meaningful unit (Webber, 1964). On the other hand, Fried (1963) has demonstrated the tremendous attachment residents felt for the West End neighborhood and the extent to which their sense of self was based on living there. Other researchers have also found that urban residents do "feel attached to" one or several city areas (Hunter, 1974; Kasarda and Janowitz, 1975); and in Rochester residents' attachment to their community increased over the last 25 years (Hunter, 1975). Research also indicates that sense of attachment is positively related to various community activities, to number of relatives living in the community (Kasarda and Janowitz, 1974), to proportion of friends living there (Hunter, 1974), to participation in local organizations (Hunter, 1974), and to informal neighboring (Hunter, 1975).

It is hard to tell how important some form of attachment is. Certainly it was a vital aspect of living in the West End. It does seem that, although it is not necessary for residents to feel an exclusive attachment to the local community, some identification with it is probably required if any concerted, constructive action is to take place (Coleman, 1970).

However, as Suttles (1972) suggests, attachment should not be viewed as the only form of social cohesion. In this research it is considered as one form and the sense of community cohesion as another form. Sense of attachment is measured by items that tap residents' identification with the development ("How happy or sad would you be to leave" if forced to and "how likely is it you would move out" if given the opportunity) and items that tap residents' evaluation of the development ("How good or bad is this development as a place to live" and "how good or bad" do outsiders think it is as a place to live)

Sense of Responsibility

Taking responsibility for shared areas is one of the ways in which residents bring outside areas into their "sphere of influence" (Newman, 1973). Indeed, residents' sense of responsibility for the use of areas just outside their apartments is what makes those spaces defended. This requires that residents take appropriate action in situations

which threaten the community's well-being. For a resident to feel such responsibility he must also believe that other residents hold similar sentiments and would take similar action. In this study sense of responsibility is measured by questions about the likelihood of a resident's helping out when someone is attacked on the grounds, the likelihood that a resident would intervene in acts of vandalism, and the likelihood that he or she would report such acts to the police or the management.

Research indicates that this form of responsibility is affected by the number of families sharing an area: the larger the number, the lower the residents' sense of responsibility (Cooper, 1972; McCarthy and Saegert, 1976). Cooper's study (1972) and Newman's ideas (1972, 1973) suggest that where the degree of acquaintance among residents is high, their sense of responsibility for shared areas outside their apartments will also be high.

It seems that although the two traditionally most important elements of community, primary ties and strong attachments, may not be critical, some mutual acquaintance and sense of responsibility are. Indeed, sense of responsibility may be the most important indicator of community, for without it a person or a family is truly vulnerable to the vagaries of urban life. Newman's concern with this represents not only his concern about crime but also, and more importantly for this research, his concern with community:

When people begin to protect themselves as individuals and not as a community, the battle against crime is effectively lost. The move of middle- and upper-class populations into protective high-rises and other structures of isolation - as well-guarded and as carefully differentiated from the surrounding human landscape as a military post - is just as clearly a retreat into indifference. The form of buildings and their arrangement can either discourage or encourage people to take an active part in policing while they go about their daily business. "Policing" is not intended to evoke a paranoid vision but refers to the oldest concept in the Western political tradition; the responsibility of each citizen to ensure the functioning of the polis (1972, p. 3).

Perceived Influence over Management

In the discussion on participation in organizations the point was made that local organizations integrate residents into the community and provide a channel for expressing opinions and taking action. It is likely that in communities where residents are involved in organizations and in other forms of community activity, they will also have a sense of efficacy. Hunter (1974) writes about community power:

Such power leads not only to the satisfaction of individual interests and organizational goals, but to a generalized sense of efficacy for local residents... The important point is that this increased sense of efficacy should be considered a motivating force leading to a circular spiral of increased activity, interaction, and local attachment (p. 158).

This study, however, did not provide the opportunity to examine the sense of efficacy in any comprehensive way. Since the communal unit is the housing development and since the one voluntary organization is the tenants' association whose major concern is often with management, sense of efficacy was measured only with respect to residents'

perceived influence over management. This form of sense of efficacy has been studied previously in public housing projects and was found to be inversely related to the number of apartments sharing a building entry (McCarthy and Saegert, 1976). Residents in walk-up buildings reported a greater sense of influence over management than did residents in high-rise buildings. The item used in that research was adopted for this study.

Sense of Community Cohesion

Finally, and perhaps most important, is the extent to which residents feel that fellow-residents will join in collective action to change a condition or prevent an intolerable event. For that is when attachment, participation in organizations, and sense of responsibility are put to the test. The local community and associated activities and sentiments can then become a true protection, an active force in standing up to impersonal, centralized bureaucratic power. Given the nature of this research, the forms of collective action were not studied directly. Instead, participation in trying to solve a common problem in the past is included as one type of community activity, and perception of the likelihood that such collective action would occur in certain hypothetical situations is included as one form of community sentiment.

CHAPTER 2

ATTRIBUTES OF HOUSING DEVELOPMENTS AND A THEORETICAL MODEL

As community is often seen to be present or absent, so too is the physical environment viewed as all-important or irrelevant. The former view, called architectural determinism, pervaded the work of planners such as Ebenezer Howard and socially concerned architects like the Smithsons. Indeed, it was the basis for urban renewal and the public housing movement: the common theme was the belief that an improved physical environment could cure the ills of slum life. Exactly what the ills were and exactly which physical features of the environment would cure them and how were never spelled out. The determinist view allowed planners and architects to view the physical environment as fully determining human behavior, but it never required them to consider specific features of the physical environment or of human behavior, either in the so-called slums or in the newly-built communities. In addition, the relationship between the physical environment and the behavior that was deemed so important was never studied. Even the Chicago school sociologists, who claimed to be concerned with the physical setting of "natural areas," did not establish empirically how particular behavioral dimensions work related to physical ones.

Social scientists have reacted intensely (Broady, 1972; Gans, 1968) against the architectural determinist view, as indeed they should when the physical environment is presumed to be the sole determinant of all,

or even most, behavior. However, the view that particular physical features as well as social ones such as common interests or population characteristics determine particular behaviors or experiences is not architectural determinism.

Empirical investigations of friendship formation and patterns of interaction in housing developments conducted in the 1950's (Festinger, Schacter and Back, 1950; Caplow and Forman, 1950; Merton, 1948) documented the specific ways in which the spatial arrangement of apartment doors determined patterns of interaction and friendship formation. The physical and the functional distance between doors was shown to determine who would become friends. The investigators also reviewed the social characteristics of these developments, particularly the homogeneity of the residents in terms of cultural values, family and child-rearing norms, and social interests (Caplow and Forman, 1950; Festinger, 1951). The general conclusion was that, given a high degree of homogeneity, spatial arrangements could determine friendship formation. In other words, physical features and social characteristics were seen by the researchers as interacting: behavior was not determined by either set of variables independently of the other.

Despite the clarity of their findings and of their conclusions about the importance of both physical and social variables, those involved in the tirade against any form of architectural determinism ignored their findings and their conclusions. Several writers insist on the greater importance of social and cultural variables over physical ones. Gans (1968), for example, uses Festinger, Schacter and Back to support his belief:

The social environment has considerably more effect. This is best illustrated by Festinger's finding in Westgate, where the social life was so rewarding that people paid little attention to the physical defects of the housing. Similarly, while the arrangement of houses on the block affects the amount of visual contact people will have, any but the most polite social contact is a result not of physical features, but of social factors, such as shared interests or values (p. 19).

These polemics about physical vs. social factors are as unnecessary as the polemics about community. Both kinds of polemics tend to pay minimal attention to the complexity of the issue and to existing research, and seem to ignore the rich opportunities for future empirical work.

Sometimes the two polemics are combined: local community is unimportant in today's world and physical design is irrelevant. This is essentially Webber's argument (1964, 1970). He argues that as a result of modern transportation and communication, people identify and associate with interest groups that are independent of physical place. Again, we read broad generalizations, no evidence, and no specification of particular populations or circumstances. As reviewed in Chapter 1, research indicates that local community still has importance for particular people, and is still the arena for particular activities and the object of strong sentiments. It may not be the only, or even the most important, source of support and meaning but exclusivity need not be a criterion for the existence of community.

One possible damaging consequence of Webber's argument is that some architects may now feel they have the license to design as they please. For example, the architectural historian, Jencks (1973) extrapolates from Webber:

...The point was that it made less and less sense to speak of a man living where his house happened to be located, if in fact he lived throughout the world in a number of interest communities...

Since form was shown to be increasingly independent of content, then the architect could increasingly provide, or avoid, any strong images of identity he wished because they would have, in any case, less and less influence on community...one would have to imagine from now on a situation where social and physical issues were worked out in parallel and then rather arbitrarily connected just as this arbitrary connection is made between content and form in all sign systems (p. 331).

Given the problems created by the physical design of residential developments in England and the United States (Newman, 1971, 1973; Yancey, 1973; Cooper, Day, and Levine, 1972), these statements are, at the least, irresponsible. With the amount of research done to date and the opportunities for further work, there is no need to decide, categorically and for all circumstances, which is more important -- social characteristics or physical features. Indeed, the difference between these two classes of variables is purely a conceptual one since people live in only one environment. The conceptual distinction is, nonetheless, a fruitful one. The essential point, however, is that the relative importance of each class can be empirically investigated in particular circumstances and under particular conditions. That is one of the objectives of this research -- to investigate the influence of physical, social, and organizational variables and to do so within the context of a theoretical causal model.

The first four parts of this chapter cover the literature on community and residential environments in terms of those attributes of housing developments which have been included in the theoretical model for this study. In the fifth part the theoretical model and its underlying assumptions are described.

Part One: Physical Design of Transition Space

The transition space in a development consists of the areas that both separate and connect the individual dwelling to the larger domain of the development and finally of the city. Some form of transition space is present in all residential environments: outdoors -- courtyard, private yard, porch, or stoop; indoors within multi-family dwellings -- lobby, elevator, stairwells, and corridors. Since one definition of transition is the passage from one place to another, and since the major function of the space between dwelling and street is to provide a means of access, it is reasonable to call these areas "transition space."

The Idea of Transition Space

The architects mentioned earlier, the Smithsons, Van Eyck, and Newman, have all written about transition space. They believe that the design of this space helps to determine people's actions and experiences in a residential environment. For the Smithsons and Van Eyck the kind of experience that can be enhanced by the design of transition space borders on the metaphysical, but their descriptions capture the experiential flavor of what transition space is:

The approach to the house forms the occupant's link with society as a whole; a lengthy climb up a stair; or down into a basement; up an avenue; up an estate road past twenty or forty semi-detached houses; along an airconditioned, artificially lit corridor. These are man's links with society. The vistas down which man looks at his world (Smithsons, 1968, p. 86).

Van Eyck views the design of what he calls "in-between space" as the purpose of architecture. This space should create balance and interaction between indoors and outdoors, between the individual and society:

To establish the 'in-between' is to reconcile conflicting polarities. Provide the place where they can interchange and you re-establish the dual phenomenon. Take an example: the world of the house with me inside and you outside or v. v. There is also the world of the street with you inside and me outside or v. v. Get what I mean: two worlds. Clashing, no transition.... Between the two society in general throws up lots of barriers while architects are so poor that they provide doors 2 inches thick and 6 feet high... Every time we pass through a door like that, we have split in two (In Newman, 1961, p. 27).

Instead of designing a space that creates an abrupt change between the two realms, Van Eyck suggests designing a space that provides a feeling of gradual change by allowing people in the transition space to be aware of the two realms at once.

Both the Smithsons and Van Eyck focus on a particular type of transition space: the former select the street and what they feel is its substitute -- the corridor in high-rise buildings. The latter describes the entrance square and the corridors of his Children's Home in Amsterdam. These three share the concern that the spaces will be used for more than just passage: for children's play, for adults' casual interaction. This concern is consistent with making the use of space one class of community activity in this study.

Both Cooper (1970, 1972, 1975) and Newman (1970, 1973, 1976) place considerable weight on the design and use of transition spaces as a factor in the success of a development. In her study of Easter Hill Village Cooper (1975) concludes:

The results of this and many other recent case studies of moderate and high density housing developments suggest that it is just these public and semi-public spaces around and between the dwellings -- their design, maintenance, use, supervision, and delimitation -- that are the crucial elements in the livability of multi-family neighborhoods (p. 199)

The defensible space hypotheses (Newman, 1973) and the design guidelines for creating defensible space (Newman, 1976) concern just these spaces. His primary message is that the right design of these spaces, particularly the grouping of small numbers of apartments and buildings and the creation of real and symbolic barriers to create zones of transition, will encourage particular activities and perceptions on the part of residents that will ultimately make the development less vulnerable to criminal intrusion. These design mechanisms and the anticipated actions and perceptions of residents -- their intense use and surveillance of space, their sense of responsibility and control, and their casual interaction with one another -- seem to generate community as well as security.

Indeed, Newman writes:

The physical elements that are used to create a defensible space have a common goal: to release the latent sense of territoriality and community among inhabitants (1976, p. 4).

In describing the erosion of safety caused by the design failure to group a small number of apartments together, Newman implies the erosion of community as well:

It is apparent that few high rise buildings have struck the right balance between community and privacy for most of their residents (1972, p. 18).

Research does show that in some housing developments people use transition space for considerable neighborly interaction, children's play, and observation of the world without requiring any other reason for being in that area (Deutsch and Collins, 1951; Wilner, Walkley and Cook, 1955; Newman, 1973, 1976; Kohn, Franck, and Fox, 1975; Cooper, 1972, 1975; Zeisel and Griffin, 1975), In working class neighborhoods

the front stoop and the sidewalk are the locus of intense community activity (Suttles, 1968; Gans, 1959; Brower and Williamson, 1974). Yancey (1973) has compared this intense use of transition space with the absence of comparable areas at Pruitt Igoe and draws conclusions similar to Newman's and Cooper's:

In lower- and working-class slums, the littered and often trash-filled alleys, streets, and backyards provide the ecological basis around which informal networks of friends and relatives may develop. Without such semi-public space and facilities, the development of such networks is retarded. The resulting atomization of the community can be seen in the frequent and escalating conflicts between neighbors, fears of vulnerability to the human dangers in the environment, and finally, withdrawal to the last line of defense - into the single-family dwelling unit (p. 118).

Transition space forms the physical link between households; residents' actions and perceptions in relation to this space form the psychological links that are the very fabric of a community. Thus the design of transition space is viewed as critical in fostering the kinds of community activity and sentiment reviewed in Chapter 1. The ideas and the research of Newman and Cooper suggest that the two physical design features of transition space that are the most important for fostering a high level of community activity and sentiment are the number of apartments sharing a building entry and the number of apartments sharing the corridor or landing in walk-up and high-rise buildings. The smaller the number of the apartments so grouped is, the higher the levels of community activity and sentiment are likely to be. The literature on each of these two physical design variables is reviewed in turn. Then the physical design variable used in this study, which combines number of apartments per entry and number of apartments per floor, is discussed.

Number of Apartments Sharing the Building Entry

The major physical design variable in defensible space theory is the number of apartments sharing a building entry. According to Newman (1973) when the number of apartments sharing an entry is 12 or less, residents adopt responsibility for the maintenance and safety of the interior shared areas and the grounds immediately outside the entry door. Moreover, they feel an association with the grounds of the development:

The fewer the number of families that share the entry to a building, the greater will be each family's association with the grounds below and the greater will be their desire to participate in maintaining the grounds and guaranteeing safety (1976, p. 107).

If this is the case, residents are likely to report greater community activity and sense of community.

Existing research provides considerable support for the significance of the number of apartments per entry. Studies indicate that in row house developments, where each apartment has its own entrance, there is a high level of community activity and sense of community (Kohn, Franck, and Fox, 1975; Newman, 1973; Cooper, 1975). Residents use the entry areas -- the stoop or the porch -- and the yard intensively; they often maintain the yard and feel responsible for keeping it safe (Kohn, Franck, and Fox, 1975; Cooper, 1975). The yard is often the scene of neighborly interaction (Cooper, 1972), and residents know a large proportion of their neighbors (Kohn, Franck, and Fox, 1975).

In most walk-up buildings the number of apartments to an entry is small, usually it is between three and nine. Cooper (1972) suggests that the small number of families sharing an entrance at St. Francis

Square (six families) contributed to the high level of community activity and sentiment. There, as in other walkups, the families sharing an entry seem to form groups. Fifty percent of the residents knew all five families well enough to chat, and over 75 percent knew at least one other family well enough to call on in emergency. Residents around one entry also joined together to clean up or even paint their shared space. The stairs and entryway functioned as yards do in row housing. Indeed, Cooper and her colleagues make the point that stairs and entranceways, when shared by a small number of families, foster relaxed interaction in the same way yards do:

The key, in terms of design, to fostering relaxed meetings between people, seems to be the provision of some form of semi-private space in which a small number of people see each other frequently. This might comprise a back or front yard, or front porch flanked by others; a staircase or landing or access corridor shared by a small number of families (Cooper, Levine, and Day, 1972, p. 40).

Zeisel and Griffin (1975) studied a moderate income development in Boston where entries were shared by six families. The residents reported that they knew the residents of their entry "about the same" as they did residents elsewhere. However, they felt enough trust in one another to leave belongings on the landing.

In a recent study of a public housing project McCarthy and Saegert (1976) compared the responses of residents in a walk-up where nine families shared an entry with those of residents in a high-rise where 64 families shared an entry. They found that in the walk-up, residents of the entry formed a social unit, whereas in the high-rise only the residents of a floor functioned that way. For example, walk-up residents' maintenance activity and sense of responsibility for intervening in acts

of vandalism extended throughout the shared areas of the building and to the grounds outside, whereas in the high-rise this sense of responsibility encompassed only the corridor and did not extend to the elevators, stairs, lobby, or the grounds below. The explanation suggested here and in their study is the difference in the number of apartments sharing the entry.

McCarthy and Saegert also found that residents of the high-rise felt they had less influence over management decisions and belonged to fewer organizations outside the development than did residents in the walk-up. Boyd, Morris, and Peel (1965) compared high-rise to walk-up residents, hypothesizing that the high-rise offered less opportunity for social interaction and that high-rise residents would show less sense of connection to the outside world. Social isolation was not found, but feelings of alienation and anomie were lower among the walk-up residents.

The number of apartments sharing the entry seems to determine the spatial boundaries of the small group of residents that forms in developments: in row houses and walk-ups the area which is under the influence of this group of residents extends to and encompasses part of the grounds. This may explain the higher levels of community activity and sentiment in such developments. The small group of households serves to integrate the individual into the development; thus, the spatial relationship of that group to the development will have considerable bearing on the level of residents' community activities and sentiments.

Number of Apartments Sharing the Corridor

The number of residents sharing an entry to a high-rise is consistently large, but the influence this has upon community sentiments and activities seems to be less when the number of families sharing a corridor is fairly small (Newman, 1973, 1976). If nine or so families share the corridor of a high-rise, one would expect the kind of interaction, use of space, and sense of responsibility that is found when a small number of families share a building entry. However, these activities and sentiments will likely extend only to the corridor, not to the entry and the grounds outside. One would therefore expect less community activity and sense of community in relation to the development than in a walk-up but more activity and sentiment than is found in high-rises where the number of apartments on a corridor is larger than nine. When the shared area of a small group of families, approximately nine or fewer, extends to the grounds, and indeed encompasses part of the grounds (as it seems to in row houses and walk-ups), greater community involvement in the development is expected than when the group's shared space extends over a single floor. However, if the number of families sharing the floor is greater than nine this sense of community may not extend even to the corridor, as was the case for most of Pruitt Igoe.

Cooper et al (1972) interviewed residents at Geneva Towers in San Francisco where 16 families share a corridor; many residents remarked that they knew none of their neighbors. Geneva Towers is a high-rise where public space "flows" up to the apartment door; Cooper (1972) describes the same phenomenon which Newman describes as the lack of transition zones:

Where there is an abrupt break between the totally private space of the house or apartment, and the totally public space of a long anonymous corridor or sidewalk, people immediately put on a "public face" and it seems less easy for them to make contact with others. The more the access space immediately outside the dwelling is used by a large number of people, the less likely one is to "bump" into the same neighbors fairly frequently and thus make the step of mutual recognition (1972. p. 40).

However, when the number of families sharing a corridor is small, residents do seem to know each other, to take care of their shared space and to have a sense of responsibility for it. As described earlier, in a high-rise public housing project in New York, where eight families share a corridor, most residents knew the other families on their floor well enough to say hello; they felt there were at least some residents on their floor they could count on in an emergency; and most made some effort to maintain the hallway (McCarthy and Saegert, 1976). Overall, their interaction with other families and their perceptions of the hall were not different from the walk-up residents', where only three families share a hall.

In Chapter 1, Newman's description of the type of acquaintance pattern that was fostered by small vestibules in early apartment buildings was reviewed. He posits that these vestibules, shared by two to four apartments, were viewed by residents as extensions of their apartments: The presence of a stranger was seen as a "penetration of their privacy;" and families personalized and cared for these areas. In fact, it was through observation of residents' protective attitudes in a few vestibules at Pruitt Igoe that the term "defensible space" was coined:

An endeavor was made to isolate those physical features which produced secure residential settings -- even in the midst of social disintegration and terror...it was agreed that something in the positioning of these limited number of units encouraged residents to adopt a protective attitude toward the shared space

outside their apartments and that this attitude led to the upkeep of the area and to its safe use (1973, p. 1).

Two physical features that were isolated were: the small number of apartments sharing that space and the presence of a door that separated the vestibule from the rest of the building. At Pruitt Igoe, however, there were very few cases of this kind of small grouping of apartments. Newman ties the erosion of community in such projects to the lack of this kind of small grouping of residents. When the number of apartments on a corridor is small, these households may form a group that links residents to the development. When the number of apartments is large, the link to the development is absent and residents, as at Geneva Towers, will likely report little community activity or sentiment.

Physical Design Variable for This Study

The number of apartments per entry and the number of apartments sharing a corridor or landing are highly correlated in the study sites for this research. Therefore the inclusion of both features as separate independent variables in the analysis would make the effect of either one of them ambiguous. (See Part Two of Chapter 4 for a discussion of this problem in multiple regression.) The solution adopted was to construct a variable that combined these two variables and, for theoretical reasons given below, put more weight on the number of apartments per corridor than on the number per entry.

The new variable, called "number of apartments per floor," is defined as the number of apartments sharing the area that is adjacent to the apartment entry. In walk-up and high-rise buildings this is the

number of apartments sharing the corridor or landing. In row house sites the area adjacent to the apartment entry is the private domain of the family in that apartment: that area is not shared with any other families so this physical design variable takes the value of zero in row house sites. This new physical design variable is a combination of the other two variables in two ways. First, in row house sites the number of units per entry is the same as the number of units sharing the space adjacent to the entry: the entry and the space adjacent to it are the domain of a single family. Second, in this study there is no overlap on this physical design variable between the three building types. All row houses are considered to have zero units per floor; all walk-up sites in the study have between one and six; and all high-rise sites have between 9 and 23.

There are a number of theoretical advantages in using this physical design variable. As stated earlier, it is likely that where the number of apartments sharing a floor in a high-rise is relatively small, the level of community activity and sentiment will be higher than in a high-rise where the number is relatively large, even though the units per entry may be of comparable size in both sites. Number of apartments per floor is thus a more subtle design feature than the number of apartments per entry. At the same time, however, it may be more relevant to people's daily lives since, particularly in a high-rise building, one's daily life is more likely to be influenced by families on that floor than by those living elsewhere in the building.

Also, the families grouped together on a floor can be viewed as the smallest group within the development to which residents belong.

As mentioned earlier, the smaller this group is, the stronger residents' ties to the development are likely to be. In other words, the apartments that are grouped around the first transition space, the one closest to residents' apartments, form a group that, to a greater or lesser degree, serves to integrate residents into the community. The smaller this group is, the more fully residents will be integrated into the community and hence the higher the level of community activity and sentiment will be.

Since number of apartments per floor is an amalgam of number of units per entry and number of units per corridor, the ideas and findings on each of these two latter variables are pertinent to this study. The expectation is, therefore, that the levels of community activity and sentiment are inversely related to the number of apartments on a floor although this relationship is likely to vary for different types of activity and sentiment. According to the ideas and findings of Cooper and Newman, number of apartments per floor is likely to have a negative effect on the levels of acquaintance, use of space, perceived quality of maintenance, perceived safety, and sense of responsibility. According to the results in McCarthy and Saegert's study it is likely to have a negative effect on perceived safety, sense of responsibility, and perceived influence over management. Whether this design variable affects any of the other forms of community activity or sentiment is also explored.

Part Two: Social Characteristics and Homogeneity of the Population

The literature on sense of community and residential environments suggests that various social characteristics of residents as well as various forms of population homogeneity are likely to affect community activities and sentiments. On the basis of this literature and for the purposes of this study, three types of social characteristics are included in the theoretical model: the percent of households with minors, the percent of heads-of-household aged 20 to 35, and the percent of AFDC families. And four types of population homogeneity are included: racial, age, family, and economic homogeneity.

Social Characteristics

Previous research suggests that the level of community activity and sentiment will be positively affected by the proportion of families with minors at home. Those activities most likely to be affected are residents' use of space outside the apartment since children are the prime users of shared outdoor space (Cooper, 1972, 1976) and the levels of acquaintance and friendship since residents are very likely to meet each other through their children (Michelson, 1970). Experience in trying to solve a common problem and sense of cohesion might also be positively affected if residents with children are more concerned about community problems.

Hunter's two studies of households in urban neighborhoods show contrasting results. In one study (1974) he found that families with children are likely to belong to more local organizations than are families

without children. On the basis of this, we would expect the proportion of families with minors to have a positive effect on the existence of a tenants' association and on experience in trying to solve a common problem, since those are the measures of participation used in this study. In another study, however, Hunter (1975) found that the number of children had no significant effect on the likelihood of belonging to a local community organization nor on local facility use, informal neighboring, or sense of community. Of course, the neighborhood where the research was conducted and the specific variables he used differed between the two studies. More importantly, however, the neighborhood where number of children at home had no effects possesses some unifying qualities that may not be present in many other urban neighborhoods. Hunter writes of this Rochester neighborhood,

Not only have many of the residents of the area consciously selected the area because of its ecological and 'community' characteristics - but they have also been involved in creating and maintaining a more formal structural embodiment of community - a local community organization... (Hunter, 1975, p. 547).

This kind of common goal among residents of finding and creating a community may give an area a kind of unity and cohesion that would not otherwise be present. In such a neighborhood the social characteristics of residents may have less effect on the level of community activity and sentiment than in a neighborhood where residents do not hold this common goal.

The effect of age on community activity and sense of community has also been studied. Hunter (1975) found that the frequency of informal neighboring showed a negative relationship to age: younger residents

did more neighboring than older residents. Belonging to a community organization, however, was positively affected by age: older residents were more likely than younger residents to belong to such organizations. Like Hunter (1975), Kasarda and Janowitz (1974) found that participation in informal social activities declines with age, as does the prevalence of local kinship ties. Older residents also tended to show less community interest but more attachment (that is, they were more likely to report being sorry if they had to leave). In contrast to Hunter's (1975) finding, Kasarda and Janowitz found that membership in local organizations declines with age. This difference may be due to the kind of local organization involved. In the Hunter study the local community organization being considered was concerned with improving neighborhood conditions. In the Kasarda and Janowitz study various types of local organizations, including political associations, charitable organizations, trade unions or social clubs, were grouped together in the analysis. It may be that participation in local organizations concerned with community conditions, such as the association in Hunter's study or tenants' associations in this study, increase with age whereas participation in other organizations such as those grouped together by Kasarda and Janowitz declines with age.

What do these findings suggest for research at the site-level where the independent variable is the proportion of residents aged 20 to 35 and the outcome variable is the mean level of community activity and sentiment? Based on Hunter's (1975) findings and those of Kasarda and Janowitz (1974), the higher this proportion is, the higher the level of

acquaintance is likely to be. The likelihood of a tenants' association being formed, the level of experience in trying to solve a common problem, and sense of community cohesion are all likely to be affected by this age variable as well but the nature of the relationship (positive or negative effect) is uncertain given the mixed findings on age and participation in local organizations. Turnover rate and the level of attachment to the community are both likely to be negatively affected by the percent of household heads aged 20 to 35, given Kasarda and Janowitz's finding that older residents report they would be more sorry to leave than younger residents. Also younger residents are more likely to have young children and to be upwardly mobile and therefore would be more likely to move either to larger or to more attractive accommodations (Michelson, 1970).

The proportion of families whose major source of income is from the program "Aid to Families with Dependent Children" is used in this study as the measure of the income level of communities. This variable thus reflects not only the proportion of low-income families but the proportion of a particularly vulnerable low-income family -- those on welfare, with children, headed by a single parent. The question is how is the percent of AFDC families likely to affect the level of community activity and sentiment. To answer this, there are several arguments that can be made based on previous research concerning the effects of social class, economic status, and the percent of one-parent, low-income families.

Kasarda and Janowitz (1974) found that higher status individuals (white collar vs. blue collar occupations) tended to have smaller pro-

portions of their friends and relatives living in their own communities, were more likely to participate in formal organizations, and showed more interest in community affairs, which the authors attribute to their skills and orientation. Hunter (1974) reports in his study that residents of higher economic status communities are more likely to participate in local organizations and evaluate their communities more highly than do residents from lower economic status areas. He did not, however, find any difference in attachment. These findings suggest that the percent AFDC will have a negative effect on the likelihood of a tenants' association being formed, on experience in solving a common problem, and on sense of community cohesion but a positive effect on friendship-kinship.

Concentrations of low income populations in very poor housing have led to large urban renewal projects only for social scientists to discover that the so-called slum was, in fact, a cohesive and highly valued community for its residents, one in which residents had strong ties with other residents and felt deep attachment to their neighborhood (Gans, 1968; Fried, 1963; Fried and Gleicher, 1961). Suttles's work (1968) also documents the strong bonds and sense of attachment in a so-called slum neighborhood. This would lead one to expect a positive relationship between the proportion of AFDC families and the levels of community activity and sentiment, at least with respect to friendship-kinship, acquaintance, and sense of attachment.

On the other hand, the concentration of low-income and one-parent families in public housing projects, particularly high rise projects,

has led to problems of crime, vandalism, distrust, and tremendous fear among residents (Newman, 1973, 1976; Cooper, Day, and Levine, 1972; Rainwater, 1966; Yancey, 1973). Based on research in public housing, then, the hypothesis would be that a high proportion of AFDC families leads to a lower level of attachment as well as to little experience in trying to solve a common problem, a low level of sense of cohesion, and little sense of responsibility.

The study sites, however, are moderate-income housing developments not public housing projects. It is likely, then, that the mixture of one-parent, welfare families with moderate-income or working families in developments that, on the whole, provide better services, more security, and a more attractive setting than most public housing will produce higher levels of community activity and sentiment than have been found in the poorer examples of public housing. Nevertheless, in some of the study sites, the proportion of AFDC families is quite high and one would expect to find some of the distrust and fear reported in the literature on public housing.

In sum, it is difficult to delineate clear expectations on what the effects of percent AFDC are likely to be. According to Newman (1972, 1973, 1976) and to some extent Cooper (1972, 1975), percent AFDC is likely to have a negative effect on victimization rate, perceived safety, and sense of responsibility but a positive effect on acquaintance (Cooper, 1975). Based on Kasarda and Janowitz (1974) and the general belief that lower-income residents tend to have more spatially restricted social bonds, percent AFDC is likely to have a positive effect on friendship-kinship unless one believes that a high percent of low income

residents breeds distrust and fear among residents. Then it is likely to have a negative effect on friendship-kinship and acquaintance and probably on other types of community activity and sentiment as well but this negative effect may depend on the physical design of the environment as well. The most reasonable position to take is that percent AFDC is likely to affect the level of community activity and sentiment but which types and in what ways is uncertain; and the effects of physical design should also be taken into account.

Homogeneity of the Population

There seems to be a considerable consensus in the literature that class homogeneity in residential environments has a strong positive effect on the degree to which close friendship ties develop among residents (Festinger, 1951; Caplow and Forman, 1950; Gans, 1968; McFall, 1974; and Keller, 1973). The actual evidence supporting this consensus, however, is meager. Furthermore, on the basis of assuming that such ties are essential to the success of residential environments and that the formation of such ties is deterred by class heterogeneity, a few planners and researchers have recommended that, when possible, class heterogeneity be avoided in planning residential environments (Gans, 1968; McFall, 1974; Keller, 1973). Class heterogeneity, in the form of a mixture of income groups can, however, be beneficial to a community in certain circumstances (Newman, 1976, in press). Moreover, not enough is known about the effects that economic homogeneity or heterogeneity has upon different forms of community activity and sentiment, even on friendship ties. In this research the effects of economic homogeneity on each type of community activity and sentiment are explored with the expecta-

tion that according to the general consensus such homogeneity has positive effects but that, in fact, economic homogeneity may show few effects or even some negative ones. It is possible, however, that economic homogeneity may show few positive effects, or even some negative ones, for two reasons. First, other site characteristics, that may have been correlated with economic homogeneity in earlier studies, will be taken into account. And, second, the developments in this research possess unifying qualities from the start that may inhibit the degree of conflict that heterogeneity could breed in other circumstances.

Racial heterogeneity may lead to the kind of conflict of values and preferences that economic heterogeneity is believed to produce but, for the most part, writers seem to place greater importance on economic homogeneity than on racial homogeneity (see McFall, 1974 for a review). In fact, some residents seem to seek out racially heterogeneous neighborhoods or housing developments precisely because they house a mixture of racial groups (Cooper, 1970; Hunter, 1975). This certainly is the case at St. Francis Square as described by Cooper (1970). The question is, nevertheless, how does racial homogeneity affect the level of various community activities and sentiments in this study? To the extent that any form of population heterogeneity breeds a certain amount of conflict or difference of opinion, racial homogeneity may show positive effects. And yet in these developments, which are communities by definition, racial homogeneity, like economic homogeneity, may show no effects or even some negative ones.

A mixture of age groups or family types in housing developments seems more likely to lead to conflict and hence to low levels of com-

munity activity and sentiment than either a mixture of income or racial groups (Michelson, 1970; Newman, 1976, in press). This is partly because young families or families with children have different needs and make different use of the environment than do families without children or older residents. On this basis, then, one would expect that population homogeneity with respect to age and the proportion of families with minors would have positive effects on the level of community activity and sentiment.

Thus on the basis of prior research and theories about population homogeneity, the effects of four types of homogeneity are examined in this research: economic, racial, age, and family homogeneity.

Part Three: Organizational Features

Two organizational features of housing developments are included in the study's theoretical model: 1) whether the development is a cooperative, which is an enduring site characteristic and therefore an independent variable; and 2) whether the development has a tenants' association, which is an intervening variable in the model. It is likely that both variables have positive effects on levels of community activity and sentiment, particularly on those that involve social interaction and those that have to do with social cohesion or solidarity -- experience in solving a common problem and sense of cohesion.

A cooperative development is likely to have higher levels of community activity and sentiment for two kinds of reasons. First, living in a cooperative makes residents members of an interest group that is different from, although not independent of, co-residence in the same de-

velopment. In a cooperative development residents are not just sharing a residential setting but are also shareholders in the same corporation and therefore have common interests greater than those of simple co-residence. Such membership may build a greater sense of responsibility and cohesion among residents. There also may be more interaction and, hence, higher levels of friendship and acquaintance among residents. Second, cooperative ownership by residents would seem to require a higher level of commitment to a development than would a rental system. This, too, suggests that the sense of responsibility and community cohesion would be greater in cooperative sites than in non-cooperative ones.

Cooper in her study of St. Francis Square (1970) attributes some of the community activity and sentiment to the fact that it is a cooperative, but since it was a case study she was unable to separate the effects of this organizational feature from the effects of physical design or social characteristics.

A tenants' association, like a cooperative, provides residents with a means for meeting each other and for achieving group solidarity. It is probable that most of the residents in a housing development do not participate regularly in the tenants' association. However, such lack of participation on the part of the majority is not necessarily a serious disadvantage for the life of the community. What does seem to be important is that there are some residents who do participate, who keep the tenants' association going. When an important issue comes up, there will be an organizational structure or mechanism through which many residents can pursue some collective action. Also, knowing there is such an association where one can raise questions or problems may

increase residents' sense of community. Thus it is reasonable to consider the existence of a tenants' association as an organizational feature of sites that influence residents' community activity and sense of community. These two organizational features, cooperative and tenants' association, are most likely to have positive effects on levels of acquaintance, friendship-kinship, experience in trying to solve a common problem, perceived influence over management, and sense of cohesion.

Part Four: Age of Site and Instability

The last three attributes of housing developments to be considered are the number of years the site has been occupied, which in the model is an enduring site characteristic and therefore an independent variable, turnover rate and victimization rate, which are viewed as two conditions of instability that are causally affected by the site characteristics and are, therefore, intervening variables in the theoretical model.

The number of years the site has been occupied is likely to have a positive effect on levels of community activities and sentiments because older communities have had more opportunity, simply as a function of age, to experience problems and attempts at resolving them. The age of a site is really a measure of the degree to which a community has a "history;" the older a community is, the more of a history it has, and hence the greater the sense of community is likely to be. It is possible that when developments have seriously deteriorated, when the problems have become very severe, age could have a negative effect on the sense of community. The severity of problems, however, may not be a function of

age at all. In any case, the sites studied in this research are all between 2 and 12 years old and none is seriously deteriorated. The assumption, therefore, that in sites like these community sentiment will be positively affected by age is a reasonable one.

Age of site and turnover rate may be important causal antecedents for another kind of reason. They both represent at the site-level what length of residence represents at the level of the individual. That is to say, the older a community is and the lower its turnover rate, the more likely it is that residents have lived there for a relatively long period of time. The length of residence of individuals in neighborhoods in Chicago has been shown to affect residents' cognitive image of their neighborhood, their attachment to it, and their knowledge of local organizations (Hunter, 1974). Although in Hunter's (1975) study of a Rochester neighborhood length of residence did not affect attachment or neighboring and showed a negative effect on the likelihood of belonging to a community organization. Kasarda and Janowitz (1974) found that length of residence had a significant positive effect on the number of acquaintances and number of relatives living in the area, on the proportion of all friends and relatives living in the local community, and on several measures of sense of community, including attachment. Turnover rate, as an indicator of the degree of transiency in a site, is likely to have a negative effect on the level of community activities and sentiments (Cooper, Day, and Levine, 1972). Since the study sites are communities by definition and hence possess a degree of cohesion from the start, both the age of the site and turnover rate may not have as much of an impact on community activities and sentiments

as length of residence does in urban neighborhoods. The objective is, nonetheless, to examine what effects these variables do have.

Victimization rate, along with turnover rate, is an intervening variable in the theoretical model. Enduring site characteristics and the existence of a tenants' association are considered to affect victimization rate, which, in turn, affects the level of community activity and sentiment. Given some of the implicit connections Newman (1972, 1973) makes between security and community, one would expect that victimization rate would have a negative effect on the level of community activity and sentiment, except perhaps in the case of experience in trying to solve a common problem where one might expect a positive relationship since sites with high victimization rates are more likely to have tried to solve crime-related problems than sites with low rates. On the other hand, people may not respond to the absolute level of crime in their community but rather to their subjective sense of how dangerous it is to live there. It seems more likely, then, that sense of safety would have a greater impact on community sentiment than victimization rate would, although victimization rate would then have an indirect effect since it is likely to affect residents' sense of safety. The expectation would then be that security and community are connected but by virtue of people's feelings and attitudes rather than by virtue of the objective situation. Whether or not this is the case is explored in this research by including both victimization rate and perceived safety as intervening variables in the theoretical model. The questions to be answered are: How does rate of victimization affect the level of community activities? How does victimization rate affect the level of

community sentiments both directly and indirectly via perceived safety? And how does perceived safety itself affect the level of community sentiments?

Part Five: A Theoretical Model of
Community Activities and Sentiments

A theoretical model is purposely a highly simplified version of reality. No theoretical model can ever be established as the correct one since additional variables can always be added or different assumptions made that could change the model considerably. The purpose of using a model is not to establish its correctness but to evaluate and modify it in accordance with the data analyzed. Blalock writes:

In order to avoid empiricist objections to causal terminology, we prefer to think in terms of causal models of reality.... Since these do not refer to reality itself, and since a number of alternative models may yield the same predictions, we can never actually establish a given model. But we can proceed by eliminating or modifying inadequate models that give predictions inconsistent with the data (Blalock, 1961, p. 173).

An important advantage of using a theoretical causal model is that it makes explicit the researcher's assumptions about the causal order of the variables that might otherwise remain implicit only. Duncan writes of the causal model or path scheme:

The point is that any causal interpretation must rest on assumptions.... The great merit of the path scheme, then, is that it makes the assumptions explicit and tends to force the discussion to be at least internally consistent....With the causal scheme made explicit, moreover, it is in a form that enables criticism to be sharply focused and hence potentially relevant not only to the interpretation at hand but also, perchance, to the conduct of future inquiry (Duncan, 1966, p. 7).

And finally a causal model, such as the one presented in this study,

is based on assumptions about the causal sequence of variables that cannot be demonstrated empirically but can only be defended on the basis of previous findings, theory, and logical judgments on the part of the investigator.

General Causal Order

The most fundamental of such assumptions underlying this study's model is that attributes of the housing development, whether they are enduring site characteristics, the existence of a tenants' association or conditions of instability, are considered causal antecedents of community activities and community sentiments and that community activities are considered causal antecedents of community sentiments. The guiding research objective is to examine how community attributes and community activities affect community sentiments. Given that objective as the substantive area of this research, the overall causal order of variables, from attributes of developments to activities to sentiments, is a reasonable one. Such an order does not mean that residents are viewed as passive responders to the housing environment but rather that the environment facilitates, or discourages, the pursuit of certain activities and the adoption of certain attitudes. In this particular study it is that relationship, from environment to activities to feelings, that is being investigated. This is a strategic, not a theoretical choice (Franck, 1976).

Given another research design and another guiding objective, one might very well study how residents influence their environment or, particularly in a longitudinal study of change, one might study how

environments and people influence each other (Franck, 1976). Some comments of Homans (1950) are pertinent here:

The group is not passive before the environment...It even defines what its environment shall be. Its purposes make different aspects of the environments important. The relationship between group and environment is never a one-way matter. But we are weak creatures, and our tools of language and analysis are soft. We ought to say everything at once, yet in our desperation we find we have to start somewhere. We have chosen to begin with the environment and its influence on the group (Homans, 1950, p. 197).

The basis for the overall causal order of variables in this study's model is also derived from the theoretical and empirical work of Newman (1972, 1973, 1976) and Cooper (1970, 1972, 1975) who address the ways in which social, physical, and organizational attributes of housing developments affect residents' activities and perceptions. The primary difference between their assumptions and the causal model adopted here is the difference between implicit assumptions about causal relationships and explicit ones.

Hunter (1975) and Kasarda and Janowitz (1974), however, make their assumptions about causal order explicit. Those assumptions provide further support, in the form of precedents, for the assumptions made in this research. In Kasarda and Janowitz's model attributes of the residential setting are viewed as causal antecedents of various community activities and sentiments, and certain activities (local social bonds) are viewed as causally prior to community sentiments. Hunter (1975) studied only one community so his model places characteristics of individual residents as causally prior to their activities and sentiments. Both types of community activities in his model, local facility use and informal neighboring, intervene between the independent variables

and community sentiment. In both models, then, characteristics of the community or of the household are the independent variables; activities in the form of social bonds, facility use, and organizational membership are intervening variables; and different measures of sense of community are the final outcome variables.

Thus, as Land (1969) recommends, the general causal order of variables in the model for this study is based on the substantive area of this research as well as on the findings and ideas of other researchers in this area. A few points about the causal sequence of certain intervening variables are clarified below.

The Model in Detail

Figure 2.1 is a simplified representation of the study's theoretical model. The various sets of variables are enclosed in boxes to reduce the number of arrows that have to be drawn. In the analysis and interpretation of findings each variable within each box in Figure 2.1 is treated as a separate variable. Thus, for example, the effects that number of apartments per floor has on tenants' association, victimization rate, turnover rate, each type of community activity, perceived quality of maintenance, perceived safety and each type of community sentiment are all examined.

The independent or exogenous variables are 10 attributes of housing developments, called "enduring site characteristics." These site characteristics are: 1) largely predetermined by the federal program or programs under which a development is built and financed, by the objectives of the sponsoring board, and by the management policies

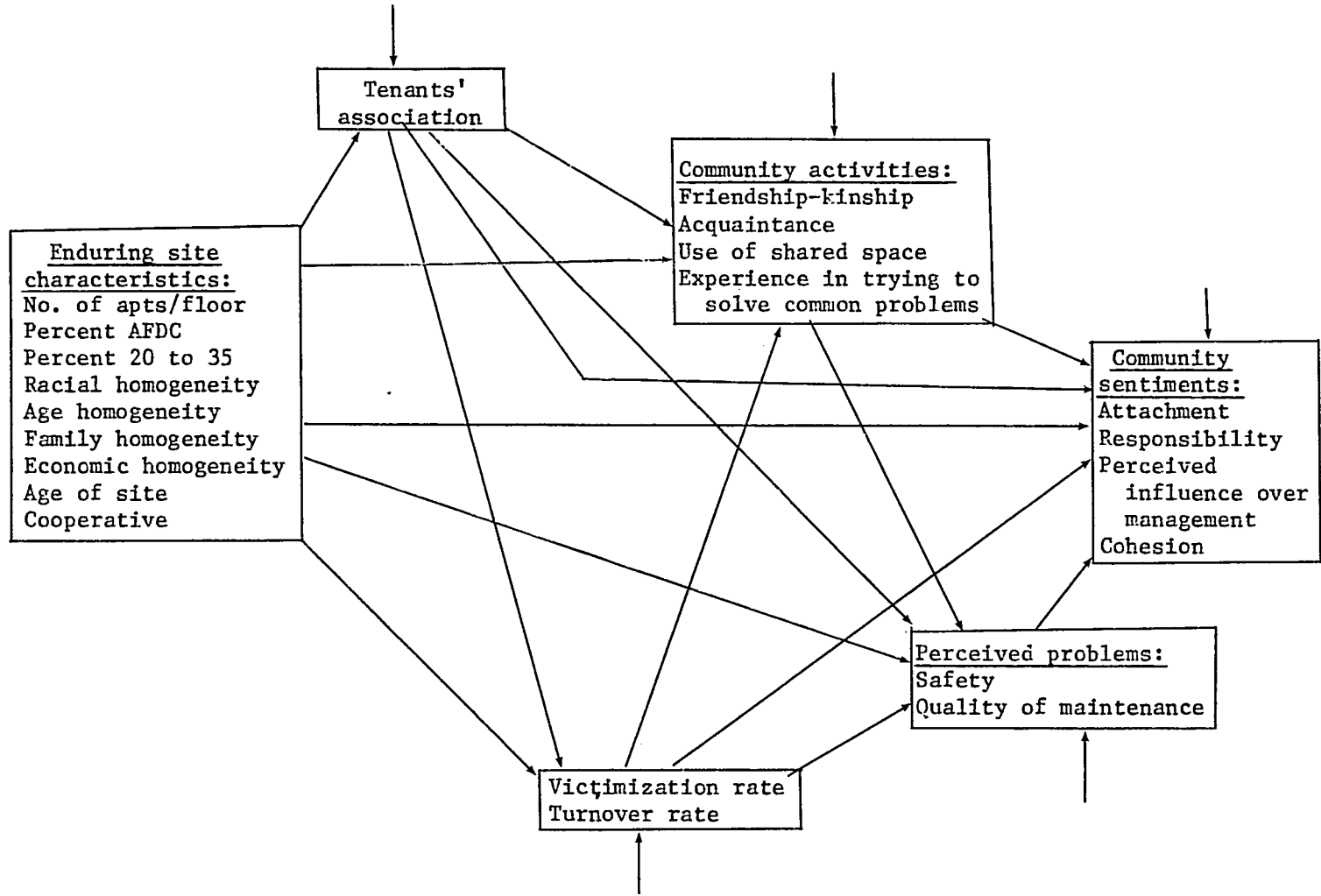


Figure 2.1

Detailed Theoretical Model of Community Activities and Sentiments

adopted in accordance with the federal program and the objectives of the sponsoring board; and 2) relatively enduring over time. The investigation of how these characteristics are determined is not, however, part of this research. As independent or exogenous variables, these site characteristics are considered given in the context of this model.

The formation of a tenants' association is not predetermined but instead is dependent upon residents' initiative and is, therefore, considered an intervening variable rather than an enduring site characteristic. Turnover rate and victimization rate are also considered intervening variables, but they follow tenants' association in the causal sequence. This is because a tenants' association is viewed here as a stabilizing force in communities, and in that way is likely to have a controlling effect on the rate of turnover and victimization.

Perceived quality of maintenance and perception of safety are placed between community activities and sentiments in the causal sequence largely because activities, in the context of this model, are viewed as causally prior to attitudes or feelings. This is consistent with Hunter's (1975) model and makes certain logical sense in that the pattern of activities such as acquaintance, friendship, or use of space are likely to be more enduring over time than perceptions or feelings, which may change suddenly as a function of a particular experience or event.

Each variable in the model is posited as affecting all subsequent variables both directly and indirectly. Thus, for example, the number of apartments on a floor is assumed to have a direct effect on each type of community activity as well as indirect effects via the three variables

that are placed between enduring site characteristics and community activities.

The unit of analysis in this model is the housing site: the independent variables are characteristics of sites; the intervening variables are measured at the site-level; and individual residents' responses about activities, perceptions, and sentiments are aggregated by site. Using the site as the unit of analysis is consistent with the work of Newman (1972, 1973, 1976) and Cooper (1970, 1972) and with the primary objectives of this research -- to examine the ways in which various site characteristics of housing developments affect residents' community activities and sentiments and to do so within the context of a theoretical causal model.

The model developed is a multi-stage, multivariate path model (Land, 1969). The first stage consists of one variable, tenants' association; the second stage contains two variables, victimization rate and turnover rate; the third stage consists of four community activity variables; the fourth stage is composed of perceived quality of maintenance and perceived safety; and the final stage consists of four community sentiments, which are the final outcome variables.

CHAPTER 3
HOUSING SITES, SAMPLE OF RESPONDENTS,
AND SOURCES OF DATA

The primary source of data for this study is a survey conducted in late 1976 and early 1977 with a sample of 1615 adult residents in Newark, St. Louis, and San Francisco.¹ The sample of residents is a stratified probability sample; the stratification variables are characteristics of the housing developments where the residents live. The primary source of data, the interviews with residents, was supplemented with data obtained from interviews with housing managers, from housing records, and from site visits.

This chapter is divided into four parts. In the first part the selection and the characteristics of the housing sites are described. In the second part the sampling design and the characteristics of the respondents are reviewed and in the third part the sources of data are discussed. The fourth part is a short review of the advantages and limitations of the research design.

¹ This study is part of a larger research project, entitled "Crime and Instability in Federally-Assisted Housing," that is being conducted by Oscar Newman, Karen Franck, David Nasatir, and Barbara Bryan at the Institute for Community Design Analysis. A preliminary report on this project has been completed and is available from the Institute for Community Design Analysis.

Part One: Housing Sites

The housing developments studied were intended to include all the moderate-income, federally-assisted developments in Newark, St. Louis, and San Francisco that: 1) contain more than 70 apartment units; 2) are not occupied solely by the elderly; and 3) were more than two years old as of April 1975. These were the criteria used to select the developments for the larger research project of which this study is a part. The reason for using these criteria was to maintain a certain degree of comparability across the developments studied. Very new or very small developments, as well as those housing only elderly residents, are likely to take on a very different character, and we did not wish to introduce these additional sources of variation into the study.

The 35 developments included in this study all meet these three selection criteria. They do not, however, constitute the entire universe of eligible developments in these three cities since one eligible development in St. Louis and two in San Francisco refused to participate in the study.

Most of the thirty-five developments were built under Section 221 (d)(3) or Section 236 federal housing programs which were intended to provide housing for moderate-income families. (Three developments consist of renovated buildings.) Most of the developments, however, also house low-income families under other federal subsidy programs -- the Section 8 housing assistance program, the Section 230 leased housing program whereby units are leased to the housing authority, and the rent supplement program. Seventeen of the developments house 30 percent or

more families considered low-income households who benefit from one of these three subsidy programs.

Twenty-five of the 35 developments are each composed of buildings of a single type (high-rise, walk-up, or row house), and thus they constitute 25 housing sites. The remaining ten developments, however, are each composed of two building types. These mixed developments were each divided into two sites according to building type.² Thus, when a development is composed of one building type, the unit of analysis is the entire development. When the development is composed of two building types, the unit of analysis is the group of buildings within that development that are of the same building type. Throughout this study the term "site" is used to refer to both cases and is understood to mean a group of buildings of the same type, which may or may not constitute the entire development.³

The three building types in this study are: 1) high-rise buildings, with 116 to 425 families sharing a building entrance; 2) walk-up buildings where 2 to 12 families share a building entrance, or if there is an outdoor stairway, where 2 to 10 families share the stair; and 3) row-house buildings where each family has its own apartment entrance.

²In two of the mixed developments, residents from only one building type are included in this study. At both of these developments the high-rise residents were excluded because the high-rise buildings did not meet the definition of high-rise listed above.

³The presence of two building types within a single development may have effects on residents' activities and sentiments that would not be found in developments composed of a single building type. This is recognized as a possibility but due to the limited number of developments and the limited number of mixed developments, it was not feasible to study the mixed developments as a separate group.

Table 3.1 lists the building type and a few major social characteristics of the 43 housing sites studied. Table 3.1 also shows the number of respondents at each site. Altogether there are 7 high-rise sites, 25 walk-up sites and 11 row-house sites housing 26 percent, 55 percent, and 19 percent of the respondents, respectively. All of the developments with two building types are composed of row-house and walk-up buildings. The developments are referred to by number rather than by name.

The proportion of families receiving Aid to Families with Dependent Children is lower than 30 percent in 39 of the 43 sites and is less than 10 percent in 24 sites. The exceptions are developments number 25, 45, 47, and 49, where the proportion of AFDC families is more than 40 percent. The range of income levels across sites is quite wide: from a very low proportion of households earning \$5500 or more (3 percent at development 49, 5 percent at development 25) to a very high proportion (81 percent at development 45 and 90 percent at the row-house site in development 45).

At least 30 percent of the households in each site contain minors with four exceptions: the walk-up sites in developments 40, 71, 74, and 79. In some sites the proportion of households with minors is higher than 90 percent: the row-house site in development 40 and developments 25, 45, and 47.

And finally, these sites house predominantly black families. The exceptions here are development number 40 which is entirely white, and several developments that are integrated: 52, 73, 74, 80, and 85. Except for 52, the integrated developments tend to house a high proportion of

families earning more than \$5500.

Figures 3.1 through 3.8 are photographs of eight of the sites that were studied. They are included to give the reader a sense of what the developments are like and to illustrate the range of styles and ambiance that the sites represent. Figures 3.1 and 3.2 are examples of two high-rise sites. It should be noted that 6 of the 7 high-rise developments studied consist of a single building; the eighth consists of two buildings. Figure 3.1 is a high-rise six stories high with 18 apartments on a floor. Figure 3.2 shows a high-rise 21 stories high with an average of 22 apartments on a floor.

Figures 3.3 and 3.4 are two walk-up sites; in each one of these there are two apartments on a floor. Figure 3.5 is a walk-up that has an outdoor corridor or landing that is often shared by four families, although in a few cases the stair leads to a single apartment. Figure 3.6 is also a walk-up site where there are two apartments on a floor. Figures 3.7 and 3.8 show two row-house sites, where each apartment has its own entrance directly onto the grounds.

Table 3.1

Physical and Social Characteristics of Sites

| Name of city and development's ID # | Building type | Total units | % AFDC households | % Households with income \geq \$5500 ¹ | % Households with minors ² | % Black households | Number of respondents | Respondents as % of occupied units ⁴ |
|-------------------------------------|---------------|-------------|-------------------|---|---------------------------------------|--------------------|-----------------------|---|
| I. Newark | | | | | | | | |
| 23 | High-rise | 425 | 8% | 63% | 65% | 95% | 95 | 26% |
| 31 | High-rise | 268 | 5 | 49 | 35 | 80 | 69 | 27 |
| 32 | High-rise | 116 | 14 | 41 | 60 | 93 | 28 | 27 |
| 33 | High-rise | 116 | 28 | 24 | 56 | 97 | 34 | 33 |
| 34 | High-rise | 216 | 5 | 65 | 56 | 95 | 62 | 31 |
| 36 | High-rise | 200 | 5 | 78 | 72 | 100 | 61 | 31 |
| 24 | Walk-up | 86 | 25 | 27 | 52 | 100 | 31 | 37 |
| 25 | Walk-up | 75 | 50 | 5 | 92 | 100 | 24 | 33 |
| 26 | Walk-up | 96 | 24 | 53 | 73 | 97 | 33 | 36 |
| 35 | Walk-up | 270 | 7 | 56 | 50 | 89 | 84 | 31 |

Table 3.1 (Continued)

| Name of city and development's ID# | Building type | Total units | % AFDC households ¹ | % House holds with income > \$5500 ² | % House-holds with minors ³ | % Black house-holds | Number of respondents | Respondents as % of occupied units ⁴ |
|------------------------------------|---------------|-------------|--------------------------------|---|--|---------------------|-----------------------|---|
| II. St. Louis Moderate | | | | | | | | |
| 40 | Walk-up | 108 | 0% | 32% | 0% | 0% | 27 | 25% |
| 40 | Row house | 196 | 2 | 57 | 100 | 0 | 51 | 26 |
| 41 | Walk-up | 145 | 6 | 67 | 86 | 98 | 49 | 35 |
| 42 | Walk-up | 91 | 4 | 67 | 77 | 100 | 25 | 29 |
| 45 | Walk-up | 252 | 44 | 9 | 96 | 99 | 69 | 27 |
| 47 | Walk-up | 101 | 41 | 14 | 96 | 100 | 22 | 24 |
| 48 | Walk-up | 38 | 0 | 67 | 56 | 100 | 9 | 24 |
| 48 | Row house | 36 | 0 | 58 | 77 | 100 | 13 | 36 |
| 49 | Walk-up | 104 | 50 | 3 | 77 | 92 | 36 | 37 |
| 50 | Walk-up | 146 | 0 | 76 | 65 | 100 | 46 | 32 |
| 52 | Walk-up | 84 | 11 | 27 | 67 | 33 | 27 | 42 |
| 44 | Row house | 210 | 11 | 38 | 80 | 99 | 65 | 32 |
| 35 | Row house | 56 | 0 | 69 | 35 | 82 | 17 | 30 |

(continued)

Table 3.1 (Continued)

| Name of city and development's ID# | Building type | Total units | % AFDC households ¹ | % Households with income > \$5500 ² | % Households with minors ³ | % Black householders | Number of respondents | Respondents as % of occupied units ⁴ |
|------------------------------------|---------------|-------------|--------------------------------|--|---------------------------------------|----------------------|-----------------------|---|
| III. San Francisco | | | | | | | | |
| 70 | High-rise | 576 | 12% | 61% | 72% | 86% | 68 | 15% |
| 71 | Walk-up | 48 | 0 | 41 | 0 | 100 | 13 | 33 |
| 71 | Row house | 53 | 0 | 64 | 60 | 88 | 15 | 29 |
| 73 | Walk-up | 104 | 0 | 74 | 72 | 46 | 25 | 25 |
| 74 | Walk-up | 76 | 0 | 63 | 11 | 30 | 19 | 26 |
| 74 | Row house | 199 | 4 | 90 | 88 | 40 | 51 | 26 |
| 75 | Walk-up | 104 | 7 | 68 | 63 | 77 | 30 | 30 |
| 76 | Walk-up | 93 | 8 | 13 | 32 | 96 | 25 | 31 |
| 77 | Walk-up | 60 | 4 | 36 | 33 | 83 | 24 | 47 |
| 77 | Row house | 38 | 17 | 54 | 86 | 100 | 14 | 39 |
| 78 | Walk-up | 65 | 13 | 50 | 32 | 88 | 16 | 26 |
| 78 | Row house | 36 | 25 | 46 | 67 | 100 | 12 | 33 |
| 79 | Walk-up | 38 | 20 | 44 | 27 | 82 | 11 | 31 |
| 79 | Row house | 72 | 15 | 62 | 82 | 96 | 28 | 42 |

(continued)

Table 3.1 (continued)

| Name of city and development's ID# | Building type | Total units | % AFDC households ¹ | % Households with income > \$5500 ² | % Households with minors ³ | % Black households | Number of respondents | Respondents as % of occupied units ⁴ |
|------------------------------------|---------------|-------------|--------------------------------|--|---------------------------------------|--------------------|-----------------------|---|
| III. San Francisco | | | | | | | | |
| 72 | Row house | 107 | 4% | 50% | 58% | 92% | 24 | 42% |
| 80 | Walk-up | 312 | 5 | 52 | 56 | 52 | 90 | 29 |
| 80 | Row house | 70 | 20 | 69 | 86 | 42 | 21 | 31 |
| 83 | Walk-up | 108 | 23 | 32 | 65 | 97 | 34 | 32 |
| 84 | Walk-up | 158 | 12 | 34 | 60 | 96 | 47 | 31 |
| 85 | Walk-up | 299 | 0 | 81 | 49 | 36 | 71 | 24 |

¹Calculated from the household survey by taking the number of respondents whose households receive Aid to Families with Dependent Children as a percentage of the total number of respondents. Any one-parent family receiving welfare as the major source of income and with children under the age of 18 was considered to be receiving AFDC.

²Calculated from the household survey. Total household income was reduced by the number of household members multiplied by \$600 to arrive at an estimated real income.

³Calculated from the household survey using the household roster. Minors were defined as all persons aged 20 or younger who were not the head of household or the spouse.

⁴Number of occupied units at time of sampling.

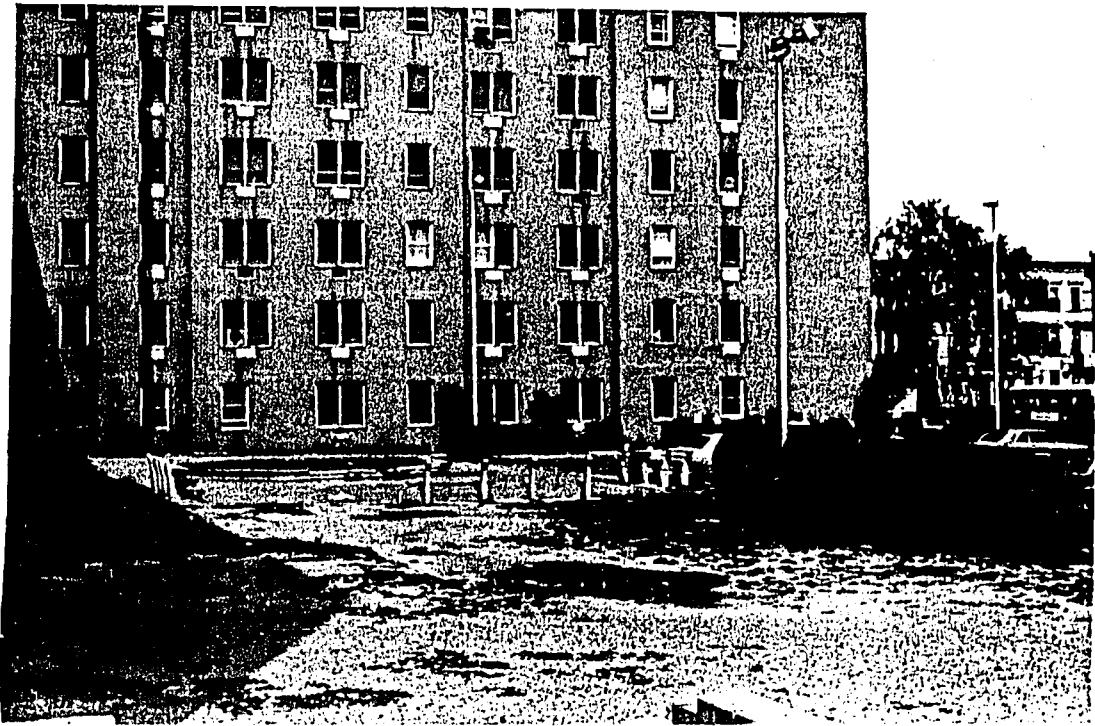


Figure 3.1

High-Rise Site: 18 Apartments per Floor

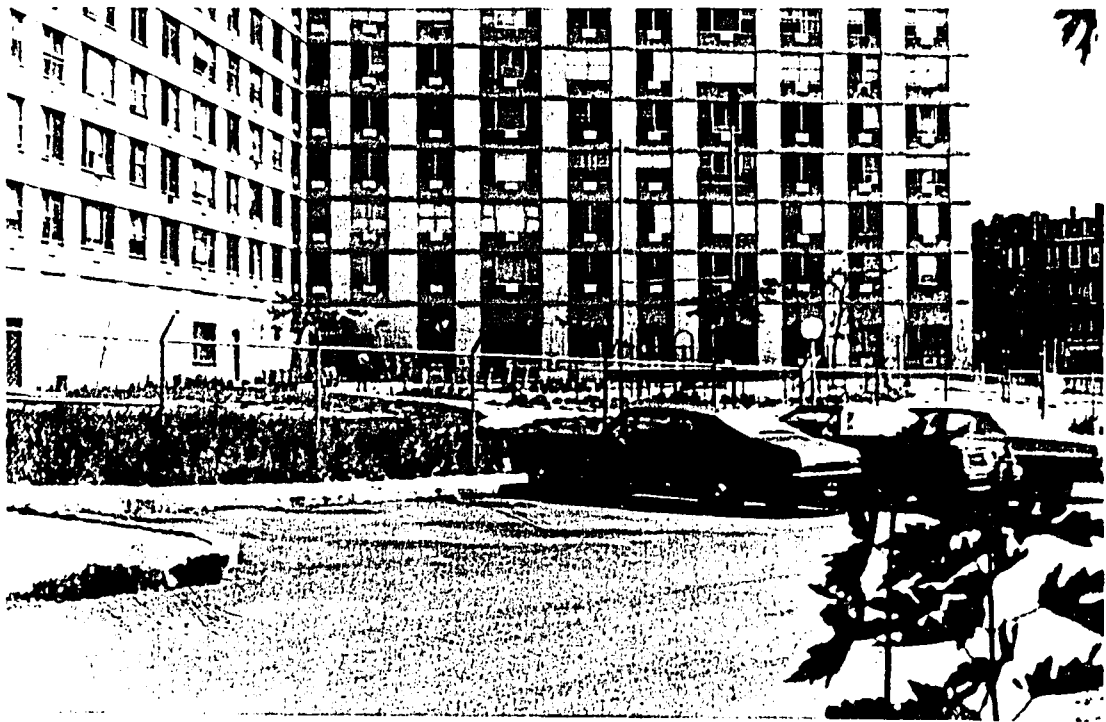


Figure 3.2

High-Rise Site: 22 Apartments per Floor



Figure 3.3

Walk-up Site: 2 Apartments per Floor .



Figure 3.4

Walk-up Site: 2 Apartments per Floor



Figure 3.5

Walk-up Site: Typically 4 Apartments per Floor



Figure 3.6

Walk-up Site: 2 Apartments per Floor



Figure 3.7

Row-House Site



Figure 3.8

Row-House Site

Part Two: Sample of Residents

The sample of residents to be interviewed for this study was a stratified probability sample. The sampling design, the eligibility requirements for respondents, the response rate, and the characteristics of the respondents are each described in turn.

Sampling Design

Six stratification variables were used in the sampling design:

- 1) City where the site is located (3 categories);
- 2) Building type (3 categories: high-rise, walk-up or row house);
- 3) Percent low-income residents (3 categories: more than 30 percent of the residents on rent supplement, less than 30 percent on rent supplement or public housing);⁴
- 4) Percent one-parent families (2 categories: 44% or less are one-parent families, or 45% or more);
- 5) Size of development (3 categories: 150 or fewer units, 151 to 600 units, or 601 or more units);
- 6) Proximity to public housing (2 categories: site is within one block of a public housing project or site is not within one block of a public housing project.

All of the above variables, except building type, represent features of an entire housing development. If a development consisted of two building types, the other characteristics of the development were applied to both groups of buildings of the same type within that development. The information for determining the percent of low-income residents and the percent of one-parent families was gathered from tenant files at each housing development.

⁴The larger research project of which this study is a part included a survey of residents in public housing, hence the inclusion of public housing as one of the strata in the sampling plan.

The six stratification variables were combined to form a sampling matrix containing a total of 324 strata or cells. The 35 sites used in this study fell into 30 different strata in that matrix. The method used for allocating the number of interviews to be obtained from each stratum was proportional allocation: the number of interviews to be obtained in a stratum was proportional to that stratum's share of the total number of occupied units across all the developments. The number of interviews to be obtained within each stratum was inflated in order to allow for ineligible and non-responding households.

To draw the sample, lists of residents' names and addresses had been obtained from each development. These lists were organized in accordance with the placement of sites within the strata so that a single list of names of residents corresponded to each of the 30 strata. From each list systematic subsamples of five names each were drawn. From each list the appropriate number of systematic subsamples of five households were drawn to produce that stratum's allocation of sample households.

The intent was to interview a male, or a female, head of household in each selected household. Therefore, as part of selecting the sample, the sex of the person to be interviewed was determined randomly. Interviewers were instructed to ignore the sex designation in those households where there was only one head of household and no spouse.

Eligibility requirements. Prior to conducting the interview, the interviewer determined whether the respondent had lived in his or her

current apartment for at least twelve months, and whether the resident spoke and understood either English or Spanish well enough to allow the interview to be conducted in one of those languages. In cases where the designated household was either ineligible under either of these criteria, or was ill or away for an extended period, the spouse, if eligible, was interviewed. During the interviewing period, it became apparent that the rate of response was quite low. To combat this problem, the criterion for length of residence was dropped from 12 to 9 months. Interviewers returned to previously ineligible households and obtained an interview if the resident was eligible under the new residence requirement.

Response rate. Table 3.2 shows the size of the designated sample (minus the vacant apartments and the ineligible households), the number and percent of respondents, and the number and percent of nonrespondents. These figures are also broken down by building type. Nonrespondents are those designated respondents who declined to be interviewed or who could not be contacted even after several attempts by the interviewer.

Table 3.2

| Rate of Response by Building Type | | | | |
|---|--------------|--------------|--------------|---------------|
| | High-rise | Walk-up | Row house | Total |
| Designated sample minus ineligibles, vacant households and other ¹ | 626 | 1157 | 384 | 2167 |
| Respondents | 417 (67%) | 887 (77%) | 311 (81%) | 1615 (75%) |
| Non-respondents ² | 198 (32%) | 270 (23%) | 73 (19%) | 541 (25%) |

¹"Other" includes any assignment which was not an apartment and any assignment not made because of administrative error or lack of time remaining for field work.

²Non-respondents are defined as designated persons who could not be contacted (i.e., not at home) or who declined to participate in the study.

The overall response rate of 75 percent is a little low by standards for sample surveys of residents at fixed address. Stephan and McCarthy (1958) suggest that one should expect a total sample loss (refusal and not-at-homes) of between 10 and 20 percent. Thus 75 percent is not unreasonable. Exact figures on refusals vs. not-at-homes are not available, but the approximate figure for the proportion of refusals is 13 percent of the total designated sample. According to Stephan and McCarthy, this rate of refusal is not high: they state, after reviewing a number of sample surveys, that one may expect refusal rates ranging up to and somewhat over 10 percent.

If the purpose of this study were to estimate population parameters based on the sample results, the response rate obtained might be

questionable. The intent, however, is to explore the causal antecedents of community activity and sentiment. Given this intent, the response rate obtained is acceptable. Table 3.2 shows a slight relationship between response rate and building type with a relatively lower proportion of interviews obtained in high-rises than in walk-ups or row houses.

Weighting the sample. Since the rate of response varied between strata in the sample, a weight was assigned to each stratum determined by the difference between the number of households interviewed in that stratum and the total number of households known to be living in the site or sites in that stratum. The weighting factor assigned to that stratum determined how heavily each case, or respondent, in that stratum would contribute to the results.

Characteristics of Respondents

The unit of analysis for testing the theoretical model in this study is the housing site, not the individual resident. In order, however, to derive variables that measure the level of community sentiment or activity in a site, individual residents' responses were aggregated in each site. It is, therefore, worthwhile to review some characteristics of the respondents across all sites.

Table 3.3 lists some of the more important characteristics of the sample of respondents. The sample is predominantly black, as expected, since the sites house primarily black households. The sample is also made up mostly of women, which also is not unexpected since 40 percent of the households are one-parent families and since many of the older residents without children may be women living without spouses.

The number of minors varies from zero to eight with the mean for the samples at 1.42. The range in estimated real income varies widely from zero to \$36,000 with a mean of \$6,727. The mean age of the respondents is 39.68 years.

Table 3.3

Characteristics of Respondents
(N = 1615 respondents)

| Characteristics of Respondents (N = 1615 respondents) | | | | |
|--|--------------------------|---------------------------|-------|-------|
| I Continuous variables | Minimum & maximum values | \bar{X} | Md | s |
| No. of minors in household | 0- 8 | 1.42 | 1.15 | 1.45 |
| Estimated real income ¹ | 0-36,900 | 6,727 | 5,809 | 5,407 |
| Age of respondent | 17-93 | 39.68 | 35.28 | 14.62 |
| II Categorical variables | Values | Percentage of respondents | | |
| Sex of respondent | Female | 76% | | |
| | Male | 24 | | |
| Race of respondent | Black | 78 | | |
| | Not black | 22 | | |
| One-parent family | One-parent | 40 | | |
| | Not one-parent | 60 | | |
| Building type | High-rise | 26 | | |
| | Walk-up | 55 | | |
| | Row house | 19 | | |
| Year moved in | 1966-1971 | 37 | | |
| | 1972-1973 | 27 | | |
| | 1974-1976 | 37 | | |

¹ Estimated real income figured as the midpoint of each answer category in R7 minus 600 multiplied by the total number of people in the household.

Part Three: Sources of Data

The major source of data for this study is a survey of 1612 residents in 35 housing developments. Some data, however, were obtained from interviews with the managers of the developments, from records kept by managers and by housing agencies, and from site visits. Each of these sources of data is described below.

Interviews with Residents

The interviews with residents were conducted by interviewers living in each of the three cities who were hired and supervised by staff of the Research Triangle Institute. The majority of the interviewers were middle-aged women who had considerable experience in conducting interviews. In San Francisco, however, where a very large number of interviews were conducted, many of the interviewers were college or graduate students who were not practiced interviewers. In each city two-day interviewer training sessions were conducted by staff from the Institute for Community Design Analysis. The first two or three interviews conducted by each interviewer were carefully reviewed by RTI field staff and, if necessary, the interviewer was given further instruction on how the questionnaire was to be administered. RTI field staff edited each questionnaire before mailing it in, and if necessary asked interviewers for further clarification of particular answers.

Each designated respondent in the sample was sent an introductory letter which described the study, mentioned the incentive payment of \$5.00 and requested his or her participation. The letter was followed by

a visit from the interviewer to whom that sample household had been assigned. If the designated respondent was eligible and agreed to be interviewed, the interview was conducted at that time, or, if necessary, at a later time. Interviewers made up to 10 visits to sample households in order to contact the designated respondent and obtain an interview.

Every effort was made to conduct the interview in private, that is, without another adult present. The interviewer read the questions, which included both fixed-choice and open-ended items, and the answer choices. The respondent was given a set of answer cards to aid him or her in choosing answers to some fixed-choice questions. Most interviews were completed within one and one-half-hours, although some lasted as long as two hours. At the end of the interview, each respondent was paid \$5.00.

The questionnaire administered to the residents covered a wide variety of topics including: evaluation of the development and different building types; neighboring and friendship-kinship bonds with other residents; sense of community, measured in different ways; evaluation of management; use of shared areas outside the apartment; maintenance of areas outside the apartment; perception of vandalism problems; perception of safety of different areas; evaluation of police and security guards; victimization experiences; and demographic information. A copy of the questionnaire can be found in Appendix A.

Interviews with Managers

The preferred respondent for the manager interview was the on-site manager. In some cases a managing agent or assistant manager had to be substituted. In two cases the manager refused to be interviewed; for one of these developments information was obtained from a tenant leader. The manager interview lasted approximately one and one-half hours and included primarily fixed-choice questions. The following topic areas were covered in the manager questionnaire: the activities and responsibilities of the manager and his or her staff; evaluation of the development; evaluation of residents' behavior; the proper roles of tenant and manager in running a development; management policy regarding rent delinquency, eviction, and screening of new residents; current problems of turnover, vacancy, and rent delinquency; the kinds of residents who do and do not cause problems for management; the kinds of facilities available in the development; the physical condition and necessary maintenance of the development; the financial condition of the development; and crime and vandalism problems.

Records

Data for this study were obtained from two types of records: tenant files at each development and files kept by various housing agencies in Newark, St. Louis and San Francisco.

The Department of Housing and Urban Development requires that moderate-income, federally-assisted housing developments maintain records on the socioeconomic and family characteristics of each household in residence. The only exceptions are those households which pay full market rent for apartments because their income is too high for them to qualify for any subsidy. Before the sampling plan was devised, information was collected from these records at each development on every household in residence for whom records were available. This information included: the age and sex of each household member and their relationship to the head of household; the annual income of the household; the source of income; and the date of occupancy. This information was then used to characterize each development with respect to the proportion of low-income residents and one-parent families to allow us to place each development in the appropriate stratum of the sampling matrix. Because some developments had incomplete or unreliable files, the data obtained were used solely to assign developments to strata. The demographic information on the housing sites used in the analysis were obtained from the survey of residents, not from the tenant files.

The HUD regional offices of Newark, St. Louis, and San Francisco require that their developments file annual reports with information on turnover and vacancy. The New Jersey Housing Finance Agency keeps

comparable monthly records for each development. Information was gathered from these records for 1974 through 1976 on the number of occupied units and vacant units as of June 30 or July 1 each year and on the number of households who moved out during the previous twelve months. Using this information the turnover rate for 1976 was calculated for each development in the study. The records were incomplete for twelve developments for the year 1976. Eight of these twelve developments had filed forms for 1975 but not for 1976. For those developments where records were complete for both 1975 and 1976, little difference was found between the two years for vacancy rate and turnover rate. Therefore, for the eight developments for which 1975 records were available, 1975 figures were substituted for the missing 1976 figures. In the other four developments for which neither 1975 nor 1976 records were available, the housing manager's replies to relevant questions in the manager interview were used to provide information on vacancy and turnover for 1976.

Site Visits

I visited each housing development in the study at least once. During those visits photographs and notes were taken and maps or blueprints were consulted. The objective was to document the physical design characteristics of the site and to ensure that the correct building type designation had been made.

Part Four: Review of the Research Design

The research design for this study is thus a survey conducted at one point in time with a large number of residents in a fairly large number of housing sites that vary in clearly distinguishable ways. The survey instrument consists of both fixed-choice and open-ended questions, but in the analysis for this study only the fixed-choice items are used. This research design, as any other one, has its limitations and its advantages.

First, in a study like this one the researcher depends on residents' answers to specific, predetermined, fixed-choice questions as measures of their feelings and actions. Problems of validity and reliability arise. The items may be understood in different ways by different respondents; respondents may be to some degree unwilling or unable to express their feelings or describe their actions in terms of the answer choices given them; and interviewers may miscode or misinterpret the answers that are given. To combat these problems as much as is possible, the questions were carefully worded, the questionnaire was pretested, and interviewers were trained and supervised. A review of some of the answers to the open-ended questions which follow the fixed-choice items suggest that respondents did appear to understand the questions as intended. And, finally, the questionnaire items used in this study refer to experiences and feelings that are common to most people's everyday lives. Furthermore, by asking about people's actions or experiences as well as about related feelings or attitudes, one is able to establish to some extent the validity of

the items used. One of the important characteristics of this study is that both people's sentiments and their actions or experiences are included in the model and the relationships that are found to exist between these two realms lend confirmation to each. When these relationships make logical sense, as between victimization rate and fear of crime for example, one has evidence for believing the measures used. Further confirmation of the validity of the items can be gained when the items are shown to be related to other variables in the same ways that have been demonstrated in earlier research. Naturally the attitudes are likely to change over time as different events or circumstances occur. This must be recognized and the findings interpreted in that context.

Second, in such a study one is finding out a relatively small amount of general information about many environments rather than, for example, a lot of detailed information about a few environments. The former approach allows one to make statements about how a variety of characteristics of environments affect a variety of behaviors and attitudes without providing the researcher with substantive accounts of specific events or circumstances in particular settings. In studying a smaller number of environments, in some cases a single one, in depth or over time one gains the latter kind of information but foregoes the former (see for example Cooper, 1970, 1972, 1975 or Kohn Franck, and Fox, 1975). Most of the existing research on housing developments consists of such detailed studies of a smaller

number of sites. The research design of this study, therefore, provides an unusual opportunity to examine how a range of site characteristics of housing developments affect a range of residents' activities and sentiments.

CHAPTER 4
TECHNIQUES OF ANALYSIS

The techniques of data analysis used in this study are primarily factor analysis and path analysis, the latter being based on results obtained from multiple regression. In the results chapters (Chapters 5 and 6), the findings produced by the techniques of multiple regression and path analysis are presented. In this chapter all the variables that were included in the regression analysis are described in some detail. In the first part of this chapter the variables used to measure residents' activities, perceptions, and sentiments are described, and in the second part the variables measuring the attributes of the sites are described. In the third and final part the steps involved in analyzing the relationships among the variables are listed and the conventions adopted for conducting the regression and path analyses and for interpreting the results are presented.

One point concerning the unit of analysis needs to be clarified. In the regression and path analyses the unit of analysis is always the housing site: the patterns of relationships among site characteristics, community conditions, community activities, community problems, and community sentiments are analyzed at the level of housing sites. However, in order to construct measures of some of these variables, data were analyzed at the level of the individual respondent: the indices measuring community activities and sentiments were constructed at the respondent level. Then residents' mean score at each site on these

indices was used to measure the level of community activities or sentiments at each site. Therefore, in order to explain the construction of these indices, respondent-level findings are presented in Part One of this chapter.

Part One: Residents' Activities,
Perceptions, and Sentiments

The major purpose of this study is to examine how various attributes of the housing environment affect various forms of community activity and sentiment and to do so in the context of a theoretical causal model. Four types of community activity have been posited as part of the model: friendship and kinship bonds, acquaintance with other residents, residents' prior experience in trying to solve a community problem, and use of shared space outside the apartment. Four types of community sentiment have been included: attachment, sense of responsibility, sense of cohesion, and perceived influence over management. This array of activities and sentiments was developed, conceptually, prior to the survey of residents. Therefore, several items were included in the questionnaire to measure each of these variables.¹

The results of a factor analysis were used to construct the indices for measuring the following activities and sentiments: friendship and kinship bonds, acquaintance, residents' prior experience in trying to solve a community problem, attachment, sense of responsibility, and

¹The group of items intended to measure sense of community cohesion also included those that dealt with prior experience of residents getting together to solve a problem. Attachment and evaluation were originally considered as separate forms of community sentiment.

sense of cohesion. One questionnaire item was used to measure perceived influence over management and an index composed of two questionnaire items was used to measure residents' use of shared space.

Factor Analysis

The first step in the analysis was to reduce the entire pool of community activity and community sentiment items to a smaller number of variables to be used in the subsequent analysis. Factor analysis was used to indicate how the various items could be grouped to form indices and how much each item would contribute to that group. The relative weights of the single items on the resulting factors were used, in combination with the original conceptual groupings of the items, to determine which items should be combined to form a single index. These weights were also used to weight each item included in that index.

All those closed-ended items in the questionnaire that, based on theoretical considerations and their face validity, were deemed to be the best measures of the various forms of community activity and community sentiment across the three building types were included in the factor analysis, with two exceptions. Those items intended to measure use of shared space outside the apartment were not included in the factor analysis because it was important, given the theoretical model, to measure use of shared space as such and separately from other forms of community activity. Also the single item intended to measure perceived influence over management was not included since it was not intended to be combined with any other items.

Seventeen items measuring various community activities and sentiments were included in the factor analysis. The wording of each of these 17 items and the variable that each item was intended to measure are shown in columns a and b of Table 4.1. The factor on which each item weighted most heavily in the rotated factor matrix is named in column c of Table 4.1, and the name of the index in which the item was eventually included is shown in column d.

The factor analysis of these 17 items was performed on respondent-level data using orthogonal Varimax rotation and principal factoring with iteration (Nie et al, 1975). Table 4.2 presents the loadings, or weights, of each of the 17 items on the five factors in the rotated factor matrix. The boxes drawn in Table 4.2 indicate the groups of items that loaded heavily on each factor. It is the content of these items that determined the names of each of the five factors.

As shown in Tables 4.1 and 4.2, those items intended to measure evaluation and those intended to measure attachment all loaded heavily on the first factor. Since there was no strong theoretical reason to keep these two dimensions separate, all four of these items (A13, B1, B3 and C5) were combined into one index, which is referred to as "attachment" and which measures one of the four types of community sentiment. Each of the items in this index was weighted according to its loading on the first factor. (See Table B4.1 in Appendix B for the formulas used to compute each index).

As shown in Table 4.2, items F1, F2, F3, F8 and F9 all load heavily on the same factor, which is entitled "social." As indicated in Table 4.1, F1 and F3 were included as measures of acquaintance, F8 and F9 as

measures of friendship and kinship bonds, and F2 as a measure of responsibility. Given the importance of the conceptual or theoretical distinction made between dimensions of acquaintance and friendship-kinship (see Chapter 1), it seemed important not to combine all five items into a single index even though they form a single factor in the factor matrix. The factor loadings of F1, F2, and F3 are comparable in size (.474, .502, .548), as are the factor loadings of F8 and F9 (.691 and .804). Also F8 and F9, in terms of face validity and original intent, are measures of friendship-kinship. Therefore items F1, F2, and F3 were combined to form an index of acquaintance;² items F8 and F9 were combined to form an index of friendship-kinship.

Items G3 and G6, concerning whether residents had ever joined together to solve a problem and whether the respondent had participated, were originally viewed as measures of sense of cohesion. Since, however, they formed their own factor, as shown in Table 4.1, and since, in terms of content, they reflected activity or experience more than sentiment, they were kept separate from the other sense of cohesion items (Factor 5) and were combined to form the index called "common problem."

The two remaining factors correspond to the two sets of items intended to measure sense of responsibility and sense of cohesion respectively. The formation of these two indices involved the same procedure: adding the items, each item being weighted according to its factor loading.

²F2, concerning how many families could be counted on in an emergency, was included in the acquaintance index since it loaded heavily on the social factor and since its loading was comparable in size to the loadings of the other acquaintance items.

Table 4.1

Content and Purpose of Seventeen Items Included
in Factor Analysis

| Number & content of item (a) | Variable item was intended to measure (b) | Factor on which item loads (c) | Final index containing item (d) |
|---|--|--------------------------------------|---------------------------------------|
| A13. Suppose it wasn't possible for you to live here anymore and you had to move out of (NAME OF DEVELOPMENT), how sad or happy would you be to leave? (1 = very happy; 2 = very sad) | Attachment | Attachment-evaluation | Attachment |
| B1. On the whole how good or bad is (NAME OF DEVELOPMENT) as a place to live? (1 = very bad; 5 = very good) | Evaluation | Attachment-evaluation | Attachment |
| B3. What do most people from around (NAME OF CITY) who have heard of (NAME OF DEVELOPMENT) think of it? How good or bad a place to live do they think it is? (1 = very bad; 5 = very good) | Evaluation | Attachment-evaluation | Attachment |
| C5. Right now, if you could have your way about it how likely is it that you would move out of this development? (1 = very unlikely; 5 = very likely) | Attachment | Attachment-evaluation | Attachment |
| F1. In general, how often do you have casual conversations with other residents here at (NAME OF DEVELOPMENT)? (1=less frequently than once a month; 7=several times a day) | Acquaintance | Social | Acquaintance |

Table 4.1 (Continued)

| Number & content of item | Variable item was intended to measure | Factor on which item loads | Final index containing item |
|--|---------------------------------------|----------------------------|-----------------------------|
| F2. How many families do you feel there are at (NAME OF DEVELOPMENT) whom you can count on in an emergency? (1 = none; 5 = very many) | Responsibility | Social | Acquaintance |
| F3. How many families are there at (NAME OF DEVELOPMENT) where you know at least one adult resident by name? (1=none; 2=1; 3=2; 4=3; 5=4; 6=5,6; 7=7-10; 8=11-15; 9=16-30; 10=31 + families) | Acquaintance | Social | Acquaintance |
| F8. How often do you get together with close adult friends and close adult relatives who live at (NAME OF DEVELOPMENT) for instance to visit or go out together? (1=no close friends or relatives; 7 = more than once a week) | Friendship-kinship | Social | Friendship-kinship |
| F9. How many close adult friends and close adult relatives do you have who live here at (NAME OF DEVELOPMENT)? (1=none; 2=1; 3=2; 4=3; 5=4; 6=5,6; 7=7-10; 8=11-15; 9=16-30; 10 = 31+) | Friendship-kinship | Social | Friendship-kinship |
| G1. Suppose that it took management longer and longer to fix things and (NAME OF DEVELOPMENT) began to get very run down. How likely is it residents would get together and try to get management to improve the maintenance services? (1=very unlikely; 5=very likely) | Sense of cohesion | Sense of cohesion | Sense of cohesion |

Table 4.1 (Continued)

| | Number & content of item | Variable item was intended to measure | Factor on which item loads | Final index containing item |
|-----|---|---------------------------------------|----------------------------|-----------------------------|
| G3. | Since you've been here, have residents ever gotten together to solve a problem in the development? (1=yes; 2=no) | Sense of cohesion | Common problem | Common problem |
| G6. | Did you participate? (1=yes; 2=no; 3=no to G3) | Sense of cohesion | Common problem | Common problem |
| G7. | Suppose that because of budget cuts the fire station in this area was going to be closed down. How likely is it that residents in this development would try to do something to keep the fire station open? (1=very unlikely; 5=very likely) | Sense of cohesion | Sense of cohesion | Sense of cohesion |
| G9. | In general, what kind of development would you say this is--one where people mostly get together to solve problems that affect everyone or one where people mostly go their own ways? (1=people get together; 2=some of both; 3=people go own ways) | Sense of cohesion | Sense of cohesion | Sense of cohesion |
| L1. | Suppose three 13-year-old boys, who were strangers, were spray painting graffiti on the walk just in front of this building. How likely is it that a resident of this building who saw them, would tell them not to do that? (1=very unlikely; 5=very likely) | Sense of responsibility | Sense of responsibility | Sense of responsibility |

Table 4.1 (Continued)

| Number & content of item | Variable item was intended to measure | Factor on which item loads | Final index containing item |
|---|---|-------------------------------|--------------------------------|
| L3. If the kids kept on spray painting grafitti on the walk, how likely is it that the resident who saw them would call the police or management? (1=very unlikely; 5=very likely) | Sense of responsibility | Sense of responsibility | Sense of responsibility |
| L8. If someone were attacked right outside this building and called out for help, how likely is it that a resident of this building would help in some way? (1=very unlikely; 5=very likely) | Sense of responsibility | Sense of responsibility | Sense of responsibility |

Table 4.2

Factor Loadings¹ of Seventeen Items Measuring
Community Activity and Community Sentiment

| Item in questionnaire ² | Factor 1 Attachment/ evaluation | Factor 2 Social | Factor 3 Common problem | Factor 4 Sense of re- sponsibility | Factor 5 Sense of cohesion |
|--------------------------------------|---------------------------------------|--------------------|-------------------------------|--|----------------------------------|
| A13 Sorry to leave | .719 | .116 | -.031 | -.023 | .104 |
| B 1 Good place to live | .754 | .113 | .046 | .024 | .127 |
| B 3 Good image | .614 | .065 | -.046 | .072 | .160 |
| C 5 Likely to move | -.656 | -.087 | -.032 | .004 | -.138 |
| F 1 Casual conversations | .102 | .474 | -.055 | .011 | .065 |
| F 2 # in emergency | .260 | .502 | -.059 | .047 | .186 |
| F 3 # by name | .126 | .548 | -.166 | .046 | .071 |
| F 8 Interaction with friends, rel's. | -.035 | .691 | -.008 | .000 | -.010 |
| F 9 # friends, relatives | .035 | .804 | -.041 | .027 | .046 |
| G 1 Get together re: maintenance | .206 | .071 | -.144 | .087 | .603 |
| G 3 Have residents gotten together | .012 | -.128 | .902 | -.031 | -.277 |
| G 6 Did you participate | .013 | -.182 | .887 | -.048 | -.195 |
| G 7 Get together re: fire station | .100 | .063 | -.083 | .034 | .564 |
| G 9 Get together or go own ways | -.183 | -.106 | .169 | -.015 | -.563 |
| L 1 Likely to stop graffiti | .106 | .029 | -.041 | .861 | .017 |
| L 3 Likely to tell management | .003 | -.017 | -.012 | .602 | .076 |
| L 8 Likely to help in attack | .016 | .062 | -.013 | .496 | .017 |
| Percent of variance | 39.6 | 21.4 | 17.0 | 15.4 | 6.5 |

¹The factor loadings have been rounded to the nearest decimal place for ease of presentation.

²The exact wording of each item is given in Table 4.1

Use of Shared Space

As mentioned earlier, the questionnaire items measuring the use of shared space outside the apartment were not included in the factor analysis because in the theoretical model they were posited as forming a discrete form of activity, distinct from the other forms of community activity.³ An index composed only of these items did, however, need to be constructed.

To measure the use of shared areas outside the building, answers to item J10 were used to form an additive index. In J10 the respondent was asked whether or not he or she ever pursued five different activities outside the building: "sitting by yourself, sitting with other residents you know, sitting with members of your family or friends from outside the development, playing with children or watching them play, and having a barbecue or picnic." A reply of "yes" with respect to any one of these activities counted as a value of one in the additive in the additive index; a reply of "no" counted as zero. Thus the range of possible scores is from zero to five.

In walk-up and high-rise buildings it is possible for residents to use shared space that is outside the apartment but still inside the building. Item J12 in the questionnaire addressed residents' use of such areas. The respondent was asked whether or not he or she did any

³ Items were also included in the questionnaire to measure residents' maintenance and modification of shared areas outside their apartments. Because of faulty wording in the items, however, respondents probably included their care of private areas as well. This makes the meaning of the results ambiguous and biases them in favor of residents who have private areas. For these reasons residents' care and treatment of shared areas were not included in the analysis.

of the following things: "sitting by yourself or with others, chatting with other residents, playing with children and watching them play." Again the index was formed by adding up the ones (yes's) and the zeros (no's). Since row-house residents have no shared space in the building, the question was only asked of high-rise and walk-up residents. All row-house residents received the value of zero on this index.

In order to obtain a measure of each respondent's total use of space (inside the building and outside), the scores on these two indices were added together. However, in order not to discriminate against the row-house residents for not having any indoor shared space to use, a formula was used that restricted the size of the contribution which the J12 index could make to the overall index measuring total use. This formula is listed in Table B4.1 in Appendix B. The purpose was to form an overall index applicable to all three building types that included the use of interior shared space but would not, as a result, give walk-up and high-rise residents a higher possible score than row-house residents.

Perceived Influence over Management

Perceived influence over management was measured by a single questionnaire item, which had been included for that purpose and had been used to measure residents' feelings of efficacy in public housing (McCarthy and Saegert, 1976). The item was:

- H6 Some people feel that there is not much residents can do to influence what management does. How much do you agree or disagree with that idea?
(1 = strongly agree; 5 = strongly disagree)

Community Problems

Subsequent to the data collection phase of this study and during the early stages of data analysis, it became apparent that none of the indices of community activity or community sentiment was capturing the concerns residents have about day-to-day life in a residential environment, such as the quality of maintenance and the degree of safety. It also seemed probable that such concerns would affect community sentiment (particularly attachment) as much as, if not more than, community activities would. For these reasons, it seemed important to introduce an additional pair of variables into the model; this pair of variables is called "community problems."

Community problems include poor maintenance and low safety. The following questions are used to measure these two variables:

- H4. How good or bad is the maintenance here at (NAME OF DEVELOPMENT)?
(1 = very bad; 5 = very good)
- B4. How safe or unsafe is (NAME OF DEVELOPMENT) as a place to live.
By safe I mean safe from crime.
(1 = very unsafe; 5 = safe)

Summary of Sentiments, Problems, and Activities

The content of the indices, or of the single items, used to measure community sentiments, activities, and problems has been reviewed. In this section the summary statistics for each of these variables are listed at both the respondent-level and the site-level of analysis. It should be recalled, however, that it is only the site-level variables that were used in the regression and path analysis.

Respondent-level. Table 4.3 lists the eight variables measuring community activities and sentiments, the items contained in each variable when it is composed of more than one item, and the range of values, the mean, the median, and the standard deviation of each variable at the respondent-level of analysis.

Table 4.3

Indices of Community Sentiment and Community
Activity: Respondent-Level
(N=1615 respondents)

| Name of index | Items in index ¹ | Minimum ² & maximum values | \bar{X} | Md | s |
|-------------------------------------|-----------------------------|---------------------------------------|-----------|-------|-------|
| Attachment | A13, B1, B3, C5 | 28-140 | 88.60 | 90.14 | 27.31 |
| Responsibility ³ | L1, L3, L8 | 18-90 | 75.36 | 80.05 | 16.24 |
| Cohesion | G1, G7, G9 | 7-30 | 21.86 | 22.68 | 6.19 |
| Perceived influence over management | H6 | 1-5 | 3.51 | 3.74 | 1.15 |
| Friendship-kinship ⁴ | F8, F9 | 18-150 | 61.67 | 66.60 | 40.36 |
| Acquaintance | F1, F2, F3 | 4-30 | 17.18 | 17.18 | 5.66 |
| Common problem ⁵ | G3, G6 | 1-3 | 2.20 | 2.41 | .85 |
| Total use | J11, J12 | 0-25 | 11.33 | 10.46 | 8.40 |

¹Except for common problem and total care, the indices are composed of items that have been differentially weighted.

²The minimum values of the discrete items are never zero, except in the cases of J11 and J12: Hence, the corresponding indices do not have minimum values of zero.

³Thirty-three percent of the respondents received the highest possible value on the responsibility index.

⁴Forty percent of the respondents reported having no close friends or close relatives in the development.

⁵The common problem index contains only three categories: (1) residents have never gotten together to solve a problem (28% of respondents); (2) residents have gotten together but respondent did not participate (24%); and (3) residents have gotten together and respondent did participate (48%).

As indicated in the footnotes to Table 4.3, the distribution of respondents on two of the indices is somewhat skewed: 40 percent of the respondents report having no close friends or relatives living in the development and 33 percent report a very high sense of responsibility. Thus, one finding is that the respondents, overall, rate somewhat low on the friendship-kinship dimension and unexpectedly high on the responsibility dimension.

Table 4.4 lists the two items measuring perceived quality of maintenance and perception of safety and their summary statistics at the respondent level.

Table 4.4
 Items Measuring Community Problems:
 Respondent-Level
 (N = 1615 respondents)

| Name of item | Item # | Minimum & maximum values | \bar{X} | Md | s |
|------------------------|--------|--------------------------|-----------|----|------|
| Safety | B4 | 1 - 5 | 2.52 | | 1.24 |
| Quality of Maintenance | H4 | 1 - 5 | 3.15 | | 1.14 |

Site-level. In the regression analysis, where the level of community activity and sentiment at sites is the issue, the same indices of activity, sentiment, and problems were used. The measure, however, was the mean rating on each index or item at each site. For example, the measure of attachment at St. Francis Square was the mean rating of St. Francis Square respondents on the attachment index. Table 4.5 gives

the summary statistics at the site-level for variables measuring community activities and sentiments. And Table 4.6 lists the summary statistics, at the site-level, for the two items measuring safety and quality of maintenance.

Table 4.5
Indices of Community Sentiment and Community
Activity: Site-Level
(N = 43 sites)

| Name of index ¹ | Minimum & maximum values | \bar{X} | Md | s |
|-------------------------------------|--------------------------|-----------|-------|-------|
| Attachment | 57.75-116.62 | 92.24 | 93.44 | 13.58 |
| Responsibility | 60.88- 87.24 | 76.18 | 77.64 | 6.41 |
| Cohesion | 15.15- 27.54 | 21.81 | 21.61 | 3.17 |
| Perceived influence over management | 2.91- 4.18 | 3.52 | 3.44 | .33 |
| Friendship-kinship | 40.50- 86.62 | 61.48 | 60.31 | 11.76 |
| Acquaintance | 13.76- 22.46 | 17.07 | 16.90 | 1.91 |
| Common problem | 1.15- 2.76 | 2.18 | 2.32 | .42 |
| Total care | 3.71- 15.61 | 10.48 | 10.45 | 3.16 |

¹The items in each index are listed in Table 4.3

Table 4.6
Items Measuring Community Problems:
Site-Level
(N = 43 sites)

| Name of item | Minimum & Maximum values | \bar{X} | Md | s |
|------------------------|--------------------------|-----------|------|-----|
| Safety | 1.56 - 3.68 | 2.33 | 2.27 | .51 |
| Quality of maintenance | 1.91 - 4.31 | 3.26 | 3.22 | .64 |

Part Two: Attributes of the Sites

Attributes of the sites, which are sometimes referred to in this study as "community attributes," include: 1) enduring site characteristics, which are the independent or exogenous variables in the model; and 2) three other attributes (tenants' association, turnover rate, and victimization rate) that are intervening variables in the theoretical model.

In this section the set of all the community attributes that were initially considered is described. Then the empirical and theoretical rationale for excluding some of these variables from the subsequent analysis is given.

Initial Set of Variables

Prior research suggests a fairly large number of attributes of communities that are likely to influence community activity and sentiment (see Chapters 1 and 2). Some of these characteristics have more theoretical importance than others in the model proposed. Since those with less theoretical importance are likely to modify the influence of the more important ones, they were included in the initial set of variables.

At the same time, however, it is not a good idea to include in regression analysis independent variables that are highly correlated with each other. Therefore, a number of site attributes which correlated too highly with each other were not included in the regression analysis.

Tables 4.7 and 4.8 list the initial set of all the site attributes that were considered and indicate the source, range of values, and summary statistics for each variable. Table 4.7 contains the continuous variables and Table 4.8 contains the dichotomous or categorical variables. The asterisk indicates which variables were included in the regression analysis. Each of these variables was measured for each of the 43 sites separately with four exceptions, four variables that refer to an entire development: whether it is a cooperative, whether it has a tenants' association, the turnover rate, and the age of the development. These characteristics are applied to each site in the development when the development contains more than one building type and therefore two sites.

For some of the variables shown in Table 4.7 the 43 sites represent a wide range of values. For example, the range of turnover rates is from 2 to 72 percent per year and the mean is quite high -- 20 percent. The range in the proportion of AFDC families is also quite wide -- from zero to fifty percent but in this case the mean value is rather low, 12 percent. The average proportion of households with minors is about 62 percent; the average proportion of households with young heads of household (20 to 35) is 46 percent; and the average proportion with older heads of household is 24 percent but again there is a wide range of values for each of these variables.

Table 4.8 indicates that most of the sites (28) have tenants' associations and that there are very few cooperatives (5). Table 4.8 also includes four dichotomous variables that characterize the homogeneity of the population in each site. The cutting points for determining when a population should be considered homogeneous and when heterogeneous were

determined empirically: the cutting points were placed at the natural gaps or change points in the distribution of sites on the variable in question. The cutting points for each homogeneity variable are given in the footnotes to Table 4.8.

Examination of Correlations

Each of the attributes was included in the initial set either because it was essential to the model or because it was likely to modify the influence of other variables essential to the model. There is, however, an empirical problem with including in a regression analysis independent variables that are highly correlated with each other. Not only do the standard errors of the regression coefficients become very large, making the estimates of these coefficients quite unstable (Althauser, 1971), but it is also difficult to interpret the meaning of the regression coefficients (Blalock, 1963). When the correlations are extremely high (over .8), there is no question that the problem is serious. Correlations anywhere above .6, however, can raise interpretive problems according to practitioners who have had experience with this type of research. Therefore, before including the entire set of attributes in the regression analysis, the zero-order correlations between all these variables were examined. Those variables that correlated with each other at a level of .60 or higher became candidates for exclusion from the regression analysis. The decision as to which variable in a pair to exclude was made on theoretical grounds -- which one was less important in testing the theoretical model.

Table 4.7

Initial Set of Attributes
(Continuous Variables Only)
(N = 43 sites)

| Variable | Source | Minimum & maximum values | \bar{X} | Md | s |
|---|--|--------------------------------|-----------|-------|-------|
| *Typical No. of apts. per floor | Resident inter- view & site visit | 0-20 | 3.81 | 2.00 | 5.28 |
| *Turnover rate ¹ | Housing records or manager interview | 2-72 | 20.26 | 16.88 | 16.95 |
| *Age of site | Early interview with manager | 2-12 | 6.60 | 6.00 | 3.20 |
| *Percent AFDC ² | Resident inter- view | 0-50 | 12.28 | 7.25 | 2.09 |
| Percent with income over \$5,500 | Resident inter- view | 2-92 | 46.63 | 52.00 | 21.60 |
| *Percent with head of household aged 20-35 | Resident inter- view | 7-87 | 45.72 | 46.58 | 17.15 |
| Percent with head of household aged 50 or over | Resident inter- view | 2-77 | 24.09 | 24.08 | 14.81 |
| *Percent with minors ³ | Resident inter- view | 2-97 | 61.77 | 65.00 | 3.71 |
| Percent black | Resident inter- view | 0-100 | 80.84 | 94.75 | 27.89 |
| Number of facilities ⁴ | Manager inter- view | 1-5 | 2.71 | 2.71 | 1.21 |
| *Victimization rate ⁵ | Resident inter- view | .098-2.361 | .78 | .78 | .42 |

¹Turnover rate is figured as the number of families who moved out in a year divided by the total number of occupied units at the end of that year. See p. for a discussion of this variable.

²If a family's primary source of income is welfare (item R8) and if it is a one-parent family with minors 18 and under (R5), then the family is assumed to be receiving payments under the program "Aid to Families with Dependent Children."

³A minor is a member of the household aged 20 or younger who is not the head of household or spouse.

⁴Facilities include laundromat, tenants' meeting room, a day-care nursery for tenants, and a recreation room, or "other."

⁵Victimization rate is figured as the number of victimization experiences per resident that occurred in the site during the year immediately preceding the interview.

* Included in regression analysis.

Table 4.8

Initial Set of Attributes
(Categorical or Dichotomous Variables Only)
(N = 43 sites)

| Variable | Source | Values | Number of sites |
|--|--------------------|-------------------|-----------------|
| Building type | Site visit | High rise | 7 |
| | | Walk-up | 25 |
| | | Row | 11 |
| *Cooperative | Manager interview | yes(1) no (0) | 5 38 |
| * Tenants' association | Manager interview | yes (1) no (0) | 28 15 |
| * Racial homogeneity of ¹ population | Resident interview | yes (1) no (0) | 36 7 |
| * Economic homogeneity ² | Resident interview | yes (1) no (0) | 13 30 |
| * Homogeneity of family type ³ | Resident interview | yes (1) no (0) | 23 20 |
| * Age Homogeneity ⁴ | Resident interview | yes (1) no (0) | 12 31 |

¹Racially homogeneous sites are those that are less than 30 percent black or more than 75 percent black. There is only one site that it is less than 30 percent black and it is all white.

²Economically homogeneous sites are those where less than 30 percent of the households have estimated real incomes of more than \$5500 or where the percent is 69 or more.

³A homogeneous site with respect to family type is one where the percent of households with minors is less than 40 percent or more than 74 percent.

⁴A homogeneous site with respect to age is one where less than 25 percent or more than 60 percent of the heads of household are aged 20 through 35.

*Included in regression analysis.

The typical number of apartments on a floor in a site is highly correlated with building type ($r = .82$, as shown in Table B4.2 in Appendix B). This is not surprising because the typical number of apartments on a floor is largely determined by building type: row houses were scored as having zero apartments on a floor; walk-up buildings in this study have between one and six apartments on a floor; and high-rises have between 9 and 23. Although building type is an interesting design feature, the number of apartments on a floor is a good measure of the size of the smaller grouping of apartments in a residential environment. Also it is an interval-level, rather than an ordinal-level, variable. Therefore, the number of apartments on a floor was chosen as the physical design feature to be included in the regression analysis.

The number of facilities in a site is correlated with whether or not there is a tenants' association ($r = .64$). In the interests of retaining tenants' association in the regression analysis since organizations have been considered important in communities (Hunter, 1974), number of facilities was not included in the regression.

The percent of AFDC families is strongly and inversely related to the percent of households with income of \$5500 and over ($r = -.71$). Given the importance of the AFDC variable in the research and conceptual work of Newman and Cooper (see Chapter 2) and given that it represents a particular form of community vulnerability which a simple measure of the community's income-level would not represent, percent AFDC was the variable included.

The proportion of young heads of household (aged 20 to 35) is strongly and inversely related to the proportion of older heads of

household ($r = -.71$). The latter variable is inversely related to the proportion of families with minors ($r = -.65$). The percent of households with minors was an important variable to retain since the presence of children is viewed as an integrating and cohesive force in communities (see Chapter 2). Therefore, the proportion of younger, rather than older, heads of household was the variable retained to measure the age composition of sites.

Finally, the proportion of black residents is correlated with the racial homogeneity of the sites ($r = .66$), since all except one of the racially homogeneous sites are more than 75 percent black. In order to be able to include the variable of racial homogeneity, which holds more theoretical importance in this study, the variable percent of black residents was excluded from the regression analysis.

Summary of Attributes of Sites

As a result of examining the zero-order correlations between the site attributes and of deciding on the basis of the theoretical model which ones were most important, the initial set was reduced to 13 variables to be included in the regression analysis. Ten are site characteristics, one is the presence or absence of a tenants' association and two refer to community conditions: victimization rate and turnover rate. These variables are listed in Table 4.9 according to the conceptual groups that will be used to present the findings in the results chapters. The zero-order correlations between these variables can be found in Table B 4.3 in Appendix B.

Table 4.9

Attributes of the Sites Included
in Regression Analysis

| Variable Name | Conceptual Group |
|---------------------------------|---------------------------|
| Number of apartments on a floor | None |
| Percent AFDC | Social characteristics |
| Percent aged 20 to 35 | Social characteristics |
| Percent with minors | Social characteristics |
| Social homogeneity | Homogeneity of population |
| Family homogeneity | Homogeneity of population |
| Economic homogeneity | Homogeneity of population |
| Age homogeneity | Homogeneity of population |
| Cooperative | None |
| Age of site | None |
| Tenants' association* | None |
| Turnover rate* | Community conditions |
| Victimization rate* | Community conditions |

*In the regression analysis these variables were treated as dependent variables. In the model they function as intervening variables.

Part Three: Relationships among Variables

The heart of data analysis is clearly the examination of relationships among independent, intervening, and dependent variables. To do this, two paired techniques were used: multiple regression and path analysis. Multiple regression produces two types of results which are required for path

analysis: 1) standardized partial regression coefficients or beta weights, and 2) R^2 or the amount of variance in the dependent variable which is explained by the prediction variables included in the regression equation.

The theoretical model (described in the Introduction and Chapter 2) provided the framework for using multiple regression and path analysis and for interpreting the results. In this part of the chapter the application of these techniques is described and the conventions adopted for presenting and interpreting the results are given.⁴

Regression Analysis and Path Analysis

The general purpose in using path analysis is to establish which are the important direct and indirect paths in the theoretical model and, in that way, to determine the pattern of causal links from the site characteristics to the four types of community activity and, in turn, to the four types of community sentiment. To reach this end five steps were followed.

First step. The theoretical model was developed to determine the assumed causal order of the variables. There are at least three reasons for developing a model, or path scheme: 1) to delineate the set of regression equations that must be solved to obtain the path coefficients (which are standardized partial regression coefficients) for each path

⁴The following sources were consulted in conducting the regression and path analysis and in interpreting the results: Land, 1969; Kim and Kohout, 1975; Duncan, 1966; Kerlinger and Pedhazur, 1973; Empey and Lubeck, 1971; Boyle, 1970; Blalock, 1961. Advice and guidance were also provided by Gary Winkel, David Nasatir, and Arnold Simmel.

shown in the model; 2) to provide a pattern of interpretation that makes explicit the assumptions behind certain causal interpretations of relationships; and 3) to provide a calculus for computing the indirect effects of variables (Duncan, 1966).

Second step. The path coefficient for each path in the model was obtained through solving a series of regression equations. The path coefficient for a given path is equal to the standardized partial regression coefficient produced by that predictor variable when all the other predictor variables are included in the regression equation. Therefore, each variable in the model that is not one of the 10 site characteristics was regressed on all those variables which are causally prior to it in the model.

The number of predictor variables included in the regression for any variable, Y , is equal to the number of variables that, in the model, are causally prior to that variable Y . For example, in Figure 4.1 the path coefficients for the three paths leading from the independent variables, X_1 , X_2 , and X_3 , to the intervening variable Z are obtained by regressing Z on X_1 , X_2 , and X_3 ; Z in that regression equation is the dependent variable and X_1 , X_2 , and X_3 are the predictor variables. Then, in order to obtain the coefficients for the paths leading from X_1 , X_2 , X_3 , and Z to Y , Y is regressed on X_1 , X_2 , X_3 , and Z simultaneously. In that regression equation X_1 , X_2 , X_3 and Z are the predictor variables and Y is the dependent variable.

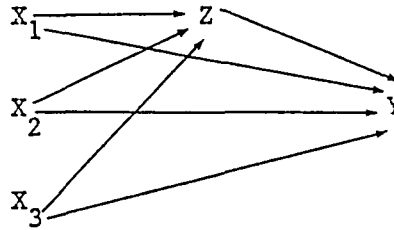


Figure 4.1

Illustration of How Path Coefficients
Are Obtained

The first regression equation would produce three standardized partial regression coefficients or beta weights. These are the path coefficients for the paths leading from X_1 , X_2 , and X_3 to Z . Each path coefficient can be considered the contribution which a predictor variable makes to a given variable when the influence of all the other predictor variables is held constant. Thus the path coefficient for X_1 to Z is the contribution of X_1 to Z when the influence of X_2 and X_3 on Z is held constant or partialled out.

Third step. The model was revised and simplified. After the path coefficient for each path in the model was obtained, the size and possible statistical significance of each one was scrutinized. Whenever a path coefficient to a given variable, say Z , was neither statistically significant nor $>.10$, that path was eliminated from the model and the variable producing that path was dropped from the regression equation for Z . This technique of revising and simplifying a model is recommended by Duncan (1966).

It must be made clear that a variable can be dropped as a predictor for one variable in the model but retained as a predictor for another

variable. For example in Figure 4.1, if the path coefficient for X_1 to Z were either significant or $>.10$, X_1 would be retained as a predictor of Z. But if the coefficient for X_1 to Y were neither significant nor $>.10$, X_1 would be dropped as a predictor of Y in the second round of regressions.

Thus each regression was conducted a second time, using as predictor variables only those retained in the revised model. The results presented and interpreted in the results chapters were obtained from the regressions using the revised model. The results obtained using the original model are shown in tables in Appendix C.

Fourth step. The residual path coefficients were computed according to the formula: $\text{residual} = \sqrt{1-R^2}$ where R^2 is the amount of variance in a given variable that is not accounted for by the predictor variables explicitly included in the model. Thus, for example, in Figure 4.1 the residual path to Z accounts for the variance in Z that is not accounted for by the variables X_1 , X_2 , and X_3 which are all the variables explicitly included in the model and causally prior to Z.

Fifth step. The values of certain indirect effects were computed. The criteria for deciding which indirect effects to compute are described in the next section of this chapter.

A direct effect is the effect of a given variable, X, on another variable, Y, when the effect is not channelled through any variables that intervene between X and Y in the model. The value of the direct effect of X on Y, as shown in Figure 4.2, is .30. (This is the path coefficient obtained by regressing Y on X, Z, and V).

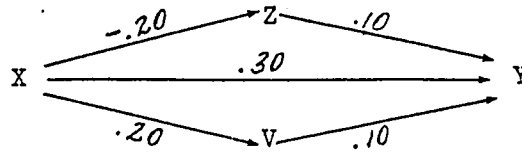


Figure 4.2

Illustration of Direct and Indirect Effects

Variable X, however, also has two indirect effects on Y: one is via the intervening variable Z and one is via the intervening variable V. The value of an indirect effect is obtained by multiplying the path coefficients representing the direct paths that are components of the indirect path. Thus the indirect effect of X on Y via Z is $(-.20)(.10)$ or $-.02$; and the indirect effect of X on Y via V is $(.20)(.10)$ or $.02$.

The total causal effect of X on Y is obtained by adding the values of the direct effect and the indirect effects (Boyle, 1970). The total effect is $(.30) + (-.02) + (.02)$ or $.30$. Thus, in this example, the total effect is equal to the direct effect since the two indirect effects balance each other. Sometimes the total causal effect can be smaller in size than the direct effect or than one or more of the indirect effects. The major purpose of path analysis in this study, however, is to determine which are the important direct and indirect effects. The total effect of a variable does not have as much theoretical importance as do the direct and indirect effects of which it is composed.

Standards for Evaluating Results

In order to present a coherent and consistent story that is clearly based on the findings, a number of standards need to be adopted for decid-

ing when a relationship between two or more variables is large or strong enough to be considered confirmed by the findings. Tests of statistical significance of path coefficients using F tests constitute such a standard of confirmation (Land, 1969; Duncan, 1966; Kim and Kohout, 1975) and are therefore used in this study.

The absolute size of a coefficient is often used to determine whether a relationship is of substantive and therefore of theoretical importance (Duncan, 1966; Land, 1969; Empey and Lubeck, 1971). This standard has also been adopted here. The decision as to how large the coefficient has to be is a matter of the investigator's judgment. "Few general prescriptions can be made for the determination of the minimum size of a substantively meaningful path coefficient. As implied in the term, this kind of decision is essentially a substantive consideration (Land, 1969, p. 35)." Two different standards for minimum size were used in this study, .10 or .20, depending on the stage in the analysis. As mentioned earlier, variables producing path coefficients which were neither statistically significant at the level of .05 nor $>.10$ were dropped from that particular regression equation. The other uses of cutting points are described below.

Direct effects. If a path coefficient representing a direct effect is statistically significant at the .05 level or has a value larger than .20, that direct effect is considered of substantive or theoretical importance in this study. Other investigators have adopted lower cutting points (see, for example, Empey and Lubeck, 1971), but their coefficients tend to be smaller than those obtained in this research.

Indirect effects. There are no methods described in the literature for testing the statistical significance of indirect effects. Indeed, there is no evidence, as far as could be ascertained, of investigators adopting a consistent standard for deciding which indirect effects can be considered substantive. The usual practice is simply to compare a number of such effects with each other (see, for example, Boyle, 1970). In this study, however, a standard was required for deciding which indirect effects were large enough to be considered substantive and therefore important. As a rule, indirect effects tend to be smaller than direct effects. It was reasonable, therefore, to choose a lower cutting point for accepting indirect effects as important; the value of .10 was chosen.

Conventions for Presenting Results

Tables in the results chapters list the zero-order correlations and the path coefficients for each of the model's intervening or dependent variables with the predictor variables retained in its regression equation. One table is shown for each intervening and each dependent variable. The amount of variance explained, R^2 , is listed at the foot of each table. The results obtained in the first set of regressions, before any predictor variables had been eliminated, can be found in tables in Appendix C.

Many path diagrams are presented in the two results chapters. Rather than showing all variables and all paths in any diagram, only certain variables and paths are included; this is done to make the diagrams and accompanying text easy to follow. Two criteria were used to

determine which variables to include in a given diagram:

1) all site characteristics that show either statistically significant path coefficients or path coefficients $>.20$ to the dependent or the intervening variables under discussion in that section of the chapter;

2) all intervening variables that are part of a chain of path coefficients, each one statistically significant or $>.20$, from a site characteristic to the dependent variable under discussion. After the variables meeting these criteria were included, then all direct paths representing either significant coefficients or coefficients $>.20$ were drawn in. Following these fairly stringent criteria allows one to identify the major paths of influence, both direct and indirect, from the predictor variables to the dependent variables that are being discussed.

In certain cases these criteria were modified. When a particular set of site characteristics is being discussed, only the site characteristics within that set that meet criterion (1) above were included in the diagram.

The curved lines between the independent variables and the zero-order correlations which these lines represent have been omitted for ease of presentation. The residual paths have also been omitted for ease of presentation.

CHAPTER 5

COMMUNITY ACTIVITIES

The theoretical model which is the basis for this study is a multivariate, multistage model (Land, 1969). The total number of possible path coefficients and corresponding paths is very large. In order to make the presentation of the path coefficients as orderly as possible and to allow an overall picture to emerge gradually through the accretion of substantive findings, the results are presented in sequential order according to the model's various stages. This chapter presents the findings for all the stages up through the four types of community activity. Chapter 6 presents the results for the two final stages of the model: community problems and the four types of community sentiment.

This chapter is divided into four parts. The first part covers the two earliest stages of the model: the existence of a tenants' association and the community conditions of turnover and victimization rate. The second part covers two types of community activity: friendship-kinship and acquaintance. The third and fourth parts deal with two additional types of community activity: use of shared space and experience in trying to solve a common problem.

The major purpose of the model is to explain the variation in, and to indicate the important causal antecedents of, four types of community activity and four types of community sentiment. Thus the four activities

and the four sentiments are more important as dependent variables in the model than are tenants' association, community conditions, or community problems. These latter variables are important in the model as intervening variables forming the causal links between site characteristics and community activities, and between site characteristics, community activities, and community sentiments. Community activities are thus of theoretical importance both as dependent and as intervening variables in relation to community sentiments. Because activities and sentiments are of such theoretical importance as dependent variables, their causal antecedents and the pattern of these antecedents are analyzed and discussed in more detail than in the case of the other variables.

Part One: Tenants' Association and Community Conditions

The first stage of the model consists of one variable, the presence or absence of a tenants' association. The next stage consists of two variables that reflect the general conditions of stability or instability in the community -- turnover rate and victimization rate. In this part of the chapter the major causal antecedents of these three variables are presented.

Tenants' Association

The role of a tenants' association as a community organization and as an independent variable is suggested by past research on community. Community organizations of various kinds have been shown to have a positive effect on the level of community activity and sentiment (Kasarda and Janowitz, 1974; Hunter, 1974) in neighborhoods. In the

context of this study's model, however, the presence of a tenants' association is not an independent variable of the same order as physical design, social characteristics, or population homogeneity since these latter variables are enduring, and indeed predetermined attributes of a site whereas a tenants' association is not. Moreover, it seemed likely that these attributes would have an effect on whether or not residents would establish a tenants' association. For these reasons, tenants' association was placed in the model as an intervening variable: in the causal order tenants' association follows site characteristics and precedes community conditions, activities, and sentiments.

The nature of the effect that site characteristics would have on tenants' organization was, for the most part, uncertain. It seemed likely that, since some site characteristics such as the number of apartments per floor, percent AFDC, or population heterogeneity were expected (on the basis of prior theory research) to have a negative effect on community sentiment, they might also have a negative effect on the likelihood that a tenants' association had been formed. One could also argue, however, that residents would combat the difficulties of living in high rises or in sites with a high proportion of AFDC families by forming tenants' associations and, for this reason, these site characteristics would have a positive effect. Therefore, the positive effects of tenants' association on the dependent variables of community activity and sentiment were expected, but the direction of the effects (positive or negative) of site characteristics on tenants' association could not be hypothesized. One exception to this was whether or not a development was cooperatively owned. This is clearly a positive causal antecedent

of tenants' association since all cooperatives are run by the residents, or "a tenant board" which falls under the definition of tenants' association.

Information on whether or not a tenants' association existed in a development was obtained from one item in the manager interview:

C56. Is there a tenant association or tenant board in this development that involves itself, or tries to involve itself, in management? (Yes or no)

All site characteristics were assumed to have causal effects on whether or not a tenants' association existed in a development. Therefore the first regression analysis on tenants' association was conducted using all ten site characteristics as predictor variables. The path coefficients produced by this analysis can be found in Table C5.1 in Appendix C. Only four site characteristics proved to have path coefficients that were either statistically significant or $>.10$. These characteristics were retained as predictors of tenants' association in the revised model whereas the other site characteristics were dropped as predictors of the existence of a tenants' association. The results of the second regression analysis on tenants' association, using only the four site characteristics retained in the revised model, are presented in Table 5.1 below.

This same procedure was followed for each variable in the model that functions either as an intervening variable or a final outcome variable. The predictor variables included in the first regression analysis are considered part of the "original" model; those retained in the second regression analysis are part of the "modified" or "revised" model. The results produced by the predictor variables retained in the revised model are shown in tables in this chapter and in Chapter 6. The results produced by the predictor variables included in the original model are shown in tables in Appendix C.

Table 5.1

Existence of a Tenants' Association as
Predicted by Site Characteristics¹

| Site Characteristics | Tenants' Association | |
|------------------------|----------------------|----------------|
| | r ² | p ³ |
| No. of apts. per floor | .31 | .38* |
| Percent aged 20 to 35 | -.27 | -.22 |
| Racial homogeneity | -.19 | -.14 |
| Cooperative | .27 | .20 |
| | R ² = .18 | |

¹The site characteristics and intervening variables included in this and subsequent tables are the ones that were retained in the revised model. For the results obtained with the original set of predictor variables, see Appendix C.

²This is the zero-order correlation.

³This is the path coefficient or the standardized partial regression coefficient (beta weight).

* F ratio for this path coefficient is significant at $p < .05$.

As indicated by the path coefficients in Table 5.1, one site characteristic has a statistically significant direct effect on tenants' association, and one other site characteristic shows a direct effect large enough to be considered of substantive or theoretical interest (that is, it is $>.20$) even though it is not statistically significant. The number of apartments on a floor has a significant positive effect: the more apartments on a floor, the greater the likelihood that a tenants' association has been established. Or, in more general terms, high-rise buildings in this study are more likely to have tenants'

associations than low-rise buildings.¹

The percent of heads-of-household aged 20 to 35 has a negative direct effect on the likelihood that a tenants' association exists: the higher the percent of young heads-of-household, the less likely a tenants' association is.

The amount of variance explained by the predictor variables is very low, 18 percent, but this does not do serious harm to the model since the primary importance of tenants' association is as an intervening variable. In other words, the purpose of the model is not to explain the variance in tenants' association but to use tenants' association to explain the variance in other variables such as community activities and sentiments.

Turnover Rate and Victimization Rate

Turnover rate and victimization rate, like the presence of a tenants' association, are of primary importance as causal antecedents of community activities and sentiments. It seemed very likely that as indicators of community conditions of stability or instability they would affect residents' activities and feelings regarding that community. Victimization and turnover, however, could not be posited as independent or as exogenous variables of the same order as the site characteristics since they are not enduring, predetermined characteristics of the site and, most important, since they can be easily viewed as causally related to those site characteristics (Newman, Franck,

¹One can consider the number of apartments on a floor as a rough indicator of the degree to which a building in this study is "high-rise" or "low-rise."

Nasatir, and Bryan, 1978; Newman, 1972, 1973, in press). Thus, in the context of the model, they are most appropriately viewed as intervening variables, dependent on site characteristics and tenants' association and, in turn, predictive of the level of community activities and sentiments.

Previous research in public housing suggests that victimization rate is positively related to the number of apartments on a floor and to the percent of AFDC families (Newman, 1972, 1973, 1976). It is likely that turnover rate is also positively affected by these two site characteristics. These two community conditions are also likely to be affected by the degree of population homogeneity, other social characteristics, whether a site is cooperatively owned, and how long it has been occupied. Finally, the existence of a tenant's association, which provides a means through which residents can air their complaints and sometimes succeed in resolving community problems, is viewed in the model as a stabilizing influence in developments. Thus it is expected that a tenants' association will have a negative (detering) effect on both turnover rate and victimization rate.

Turnover rate. Turnover rate was measured as the total number of families who moved out of a development within a twelve-month period divided by the total number of occupied apartments at the end of that period (see Chapter 3 for further description of this variable). Table 5.2 presents the zero-order correlations and path coefficients for turnover rate with the predictor variables that were retained in the revised model.

Table 5.2

Turnover Rate as Predicted by
Site Characteristics and Intervening Variable

| I Site Characteristics | Turnover Rate | |
|-------------------------|---------------|-------|
| | r | p |
| No. of apts. per floor | .27 | .44* |
| Percent aged 20 to 35 | .41 | .18 |
| Age homogeneity | .28 | .28* |
| Age of site | .03 | -.11 |
| <hr/> | | |
| II Intervening Variable | | |
| Tenants' association | -.43 | -.50* |
| | $R^2 = .41$ | |

The path coefficients are the standardized partial regression coefficients, or beta weights, computed for each predictor variable after all the predictor variables listed in the table (including any intervening variables) have been included in the regression equation. Each path coefficient thus represents that predictor variable's contribution to the dependent variable when the influence of each of the other predictor variables is being held constant, or partialled out.

The number of apartments on a floor has a significant positive direct effect on turnover rate: the more apartments, the higher the turnover rate when the effects of the other variables on turnover rate are held constant. The presence of a tenants' association does appear to have the predicted stabilizing effect: the turnover rate is significantly higher in sites without tenants' associations.²

²One could, of course, argue that the direction of causality is the reverse: that in sites with high turnover rates, tenants' associations are unlikely to be formed or to last. In the context of this

Age homogeneity has a significant positive direct effect on turnover rate: sites with populations that are homogeneous with respect to age show higher turnover rates than sites with heterogeneous populations. This difference may be due to a higher turnover rate among younger families in all sites as indicated by the slight but positive relationship between turnover rate and percent aged 20 to 35 ($p = .18$ in Table 5.2). It should also be recalled that most of the age-homogeneous sites in this study house young families: there are only two sites that house predominantly older people.

Victimization rate. The path coefficients for victimization rate with the predictor variables retained in the revised model can be found in Table 5.3. One site characteristic has a significant direct effect on victimization rate, and that is the percent of AFDC families: as expected, the higher the proportion of AFDC families, the higher the rate of victimization. The number of apartments on a floor has neither a significant nor a substantive effect on victimization rate. Possible reasons for this unexpected finding are given in Chapter 7. The variable Tenants' Association is not listed in Table 5.3 because its effect on victimization rate, as shown in the analysis of the original model, was only $-.07$ (see Table C5.2 in Appendix C). Therefore, it was not included as a predictor of victimization rate in the revised model.

model, however, the direction of influence has been posited to be from tenants' association to turnover rate. The reasons for this are given in Chapter 2.

Table 5.3

Victimization Rate as Predicted by
Site Characteristics

| Site Characteristics | Victimization Rate | |
|------------------------|--------------------|------|
| | r | p |
| No. of apts. per floor | -.26 | -.17 |
| Percent AFDC | .44 | .39* |
| Percent with minors | .34 | .18 |
| Racial homogeneity | -.12 | -.20 |
| Family homogeneity | .34 | .26 |
| Age homogeneity | 0 | -.08 |
| | $R^2 = .28$ | |

Family homogeneity shows a positive direct effect on victimization rate. Thus, sites where the percent of households with minors is less than 40 percent or more than 75 percent have lower victimization rates than sites where the percent is between 40 and 75. (It should be pointed out that the actual percent of households with minors is held constant). This suggests that a mixture of households with and without minors, regardless of which kind of family predominates, has a deterring effect on victimization rate.

Summary

Figure 5.1 is the path diagram that presents the major direct and indirect paths from predictor variables to tenants' association, victimization rate, and turnover rate. As described in Chapter 4, the criteria for determining which variables to include in this diagram are:

- 1) to include all the site characteristics that have either sta-

tistically significant path coefficients or path coefficients $>.20$ to the dependent or to the intervening variables under discussion;

2) to include all the intervening variables that are part of a chain of path coefficients, each significant or $>.20$, from a site characteristic to the dependent variable under discussion.

When the variables meeting these criteria have been included, then all the paths representing either significant coefficients or coefficients $>.20$ are drawn in.³

The figures on each path are the path coefficients. The asterisk marks a statistically significant path coefficient. The zero-order correlations between the independent variables and the curved lines that conventionally represent these non-causal correlations have been omitted for ease of presentation, as have the path coefficients for residual variables.⁴

Figure 5.1 illustrates, graphically, the direct effects of certain site characteristics on tenants' association, turnover rate, and victimization rate. It also allows for an easy comparison of these effects.

³As described in Chapter 4, following these fairly stringent criteria allows one to identify the major paths of influence, both direct and indirect, from predictor variables to dependent variable. Even following these criteria does not ensure that all the indirect effects represented in the diagram will be large enough to be considered theoretically or substantively important, as will be seen in the course of this chapter and in Chapter 7.

⁴The omission of these additional figures is not unusual; see, for example, Empey and Lubeck (1971).

For example, the two site characteristics that affect victimization rate, percent AFDC and family homogeneity, affect neither tenants' association nor turnover rate. The number of apartments per floor has direct effects on tenants' association and turnover rate but not on victimization rate.

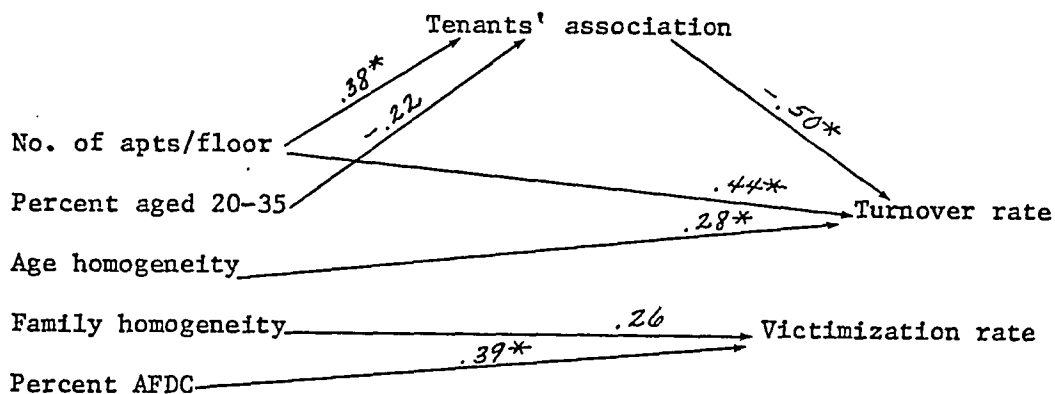


Figure 5.1

Relation of Site Characteristics and Tenants' Association to Turnover Rate and Victimization Rate
(Source: Tables 5.1, 5.2, and 5.3)

The major advantage of a path diagram over a table listing the path coefficients is the graphic presentation of the causal order of the variables and, consequently, the opportunity to identify the indirect effects of causal antecedents as well as the direct ones. Thus, for example, Figure 5.1 allows one to say that, although percent aged 20 to 35 has no direct effect on turnover rate, it appears to have an indirect effect via tenants' association. To compute the value of the path coefficient for an indirect path, the values of the coefficients for each of the component paths are multiplied (Land, 1969; Duncan, 1966; Boyle, 1970). The value for the indirect path from percent aged

20 to 35 to turnover rate via tenants' association is thus $(-.22)(-.50)$ or .11. This indirect effect meets the size criterion adopted in this study for evaluating the importance of an indirect effect ($>.10$). The conclusion, therefore, is that the percent aged 20 to 35 has a positive indirect effect on turnover rate via tenants' association: the higher the percent aged 20 to 35, the less likely there is to be a tenants' association and, in turn, the higher the turnover rate.

The number of apartments on a floor has both a direct and an indirect effect on turnover rate. The direct effect is positive: the more apartments on a floor, the higher the turnover rate. The indirect effect via tenants' association, however, is negative, $p = (.38)(-.50) = -.19$, and quite large for an indirect effect. Thus the presence of tenants' associations in sites where the number of apartments per floor is large tends to decrease the turnover rates in those sites. The direct effect, however, tells us that, independently of whether or not a tenants' association exists, the more apartments there are on a floor, the higher the turnover rate will be.

And finally, as shown in Figure 5.1, site characteristics have direct effects but no indirect effects on victimization rate.

Part Two: Friendship-kinship and Acquaintance

The nature of social interaction among residents and the role that this activity plays in the development of a sense of community among residents have received considerable attention in the literature on community. (This literature is reviewed in Chapter 1). Some writers view friendship and kinship ties as important, if not essential, in

creating a community and a community spirit (Hillery, 1955; Bell, 1968; Nisbet, 1953; Kasarda and Janowitz, 1975). Others have distinguished between the intimacy of friendship and kinship relations and the more casual, less intimate relationship among neighbors and have stressed the importance only of the latter in the development of a sense of community (Keller, 1973; Newman, 1973, 1976; Cooper, Levine, and Day, 1972). In the interests of maintaining a distinction between the two types of relationships, two separate indices were constructed, one to measure friendship-kinship bonds and one to measure acquaintance.

Newman (1972) implies that the small grouping of apartments in vestibule or hall will facilitate the development of acquaintance among residents. The Smithsons (1960) and Van Eyck (1961, 1962) seem to share this idea, as does Cooper (1970, 1972). The influence of the percent AFDC on friendship-kinship or acquaintance is not described but there is no reason to expect these characteristics to have a negative impact. If anything, percent AFDC might have a positive effect on social interaction as suggested by a study of four housing projects with a fairly high proportion of AFDC families (Kohh, Franck, and Fox, 1975). The percent of families with minors might also have a positive effect as suggested by Hunter's findings (1974). Degree of heterogeneity among residents, particularly racial or economic heterogeneity, has been held by some researchers and planners to have a discouraging effect on the development of social ties between residents (Gans, 1968; Keller, 1966; McFall, 1974). From this one would expect a positive relationship between homogeneity and the social activities of friendship-kinship and acquaintance.

The presence of organizations such as cooperative-ownership and a tenants' association is likely to promote ties since such organizations provide a way of meeting other residents. Finally, age of site and turnover rate can both be considered rough indicators of length of residence at the site-level. Since length of residence has been shown to affect the social ties of individuals positively (Kasarda and Janowitz, 1974; Hunter, 1974), one would expect these two variables to have similar effects on the level of social ties in a community.

Overview of Results on Friendship-kinship and Acquaintance

The level of friendship-kinship was measured by using residents' mean rating at each site on an index composed of the following two questions:

- F9. How many close adult friends and close adult relatives do you have who live here at (NAME OF DEVELOPMENT)?
(1 = 0 friends or relatives; 2 = 1; 3 = 2; 4 = 3; 5 = 4; 6 = 5 or 6; 7 = 7 to 10; 8 = 11 to 15; 9 = 16 to 30; 10 = 31 or more)
- F8. How often do you get together with close adult friends or close adult relatives who live at (NAME OF DEVELOPMENT) for instance, to visit or go out together?
(1 = no close friends or relatives; 7 = more than once a week).

The measure of acquaintance was residents' mean rating at each site on an index composed of the following three items:

- F1. In general, how often do you have casual conversations with other residents here at (NAME OF DEVELOPMENT)?
(1 = less frequently than once a month; 7 = several times a day)
- F2. How many families do you feel there are at (NAME OF DEVELOPMENT) whom you can count on in an emergency?
(1 = none; 5 = very many)
- F3. How many families are there at (NAME OF DEVELOPMENT) where you know at least one adult resident by name?
(1 = 0 families; 2 = 1; 3 = 2; 4 = 3; 5 = 5; 6 = 5 or 6; 7 = 7 to 10; 8 = 11 to 15; 9 = 16 to 30; 10 = 31 or more)

The two indices are fairly highly correlated ($r = .61$). But given the importance of the conceptual distinction between the two types of relationships, it was essential to keep the two indices separate in order to see how the two types of interaction are differentially determined by causal antecedents and how, in turn, the two types of interaction affect community sentiment in different ways.

Table 5.4 shows the path coefficients for friendship-kinship with the predictor variables retained in the revised model (for results obtained with the original set of predictor variables, see Table C5.3 in Appendix C). Two site characteristics have significant positive direct effects on the level of friendship-kinship: the percent of AFDC families and whether the development is a cooperative. Thus, the higher the proportion of AFDC families, the higher the level of friendship-kinship, and cooperative sites have higher levels of friendship-kinship than do non-cooperatives. Economic homogeneity has an effect opposite from the one predicted: economically heterogeneous sites show higher levels of friendship-kinship than do economically homogeneous ones. Turnover rate has the predicted negative effect: the higher the turnover rate, the lower the level of friendship-kinship bonds.

Table 5.4

Level of Friendship-kinship as Predicted
by Site Characteristics
and Intervening Variables

| I Site Characteristics | Friendship-kinship | |
|--------------------------|--------------------|-------------|
| | r | p |
| Percent AFDC | .34 | .47* |
| Percent aged 20 to 35 | -.06 | .16 |
| Racial homogeneity | .08 | .10 |
| Economic homogeneity | -.16 | -.30 |
| Cooperative | .34 | .43* |
| Age of site | .07 | .11 |
| II Intervening Variables | | |
| Turnover rate | -.23 | -.24 |
| Victimization rate | .15 | .08 |
| | | $R^2 = .29$ |

Table 5.5 shows the path coefficients for acquaintance with the predictor variables retained in the revised model. With respect to acquaintance, no social characteristics and none of the four types of homogeneity has a direct effect. But cooperative and age of site both have significant direct effects: cooperative sites have higher levels of acquaintance than do non-cooperative sites and the older the site, the higher the level of acquaintance. Whether the site has a tenants' association has a noticeable positive effect. The only causal antecedent which the two forms of interaction have in common, in terms of direct paths, is whether the community is a cooperative, which encourages both a high level of friendship and of acquaintance. The existence of a tenants' association seems to facilitate directly acquaintance, but not friendship, among residents.

Table 5.5

Level of Acquaintance as Predicted
by Site Characteristics
and Intervening Variables

| I Site Characteristics | Acquaintance | |
|--------------------------|--------------|------|
| | r | D |
| No. of apts. per floor | -.10 | -.10 |
| Percent with minors | .04 | .11 |
| Cooperative | .42 | .35* |
| Age of site | .24 | .35* |
| II Intervening Variables | | |
| Tenants' association | .42 | .32 |
| Turnover rate | -.40 | -.16 |
| $R^2 = .35$ | | |

As shown by the values of R^2 in Tables 5.4 and 5.5, the site characteristics and intervening variables account for only 29 percent of the variance in friendship-kinship and only 35 percent in acquaintance. Thus, the amount of variance explained is somewhat low, relative to other findings in this study, and one can conclude that both these forms of social interaction are relatively independent of the community characteristics examined here. This is an important conclusion in the light of the previous work of researchers and planners who have emphasized the importance of such community characteristics in determining the kind and degree of interaction among neighbors. The results presented here suggest that to a large extent in the sites studied interaction among residents is not determined by many of the community attributes over which planners have some control.

Number of Apartments on a Floor

Figure 5.2 shows the pattern of causal relationships that links the number of apartments on a floor to acquaintance and friendship-kinship via two intervening variables, tenants' association and turnover rate.⁵ Number of apartments on a floor has no direct effect on the level of either form of interaction, but it does affect both forms indirectly. The size of the path coefficients for each of these indirect paths must be computed, however, in order to determine whether they are large enough to be considered theoretically important. The indirect effect of number of apartments on a floor via tenants' association to level of acquaintance does meet the size criterion: $p = (.38)(.32) = .12$. So does the indirect effect of number of apartments on a floor on friendship-kinship via turnover rate: $p = (.44)(-.24) = -.11$

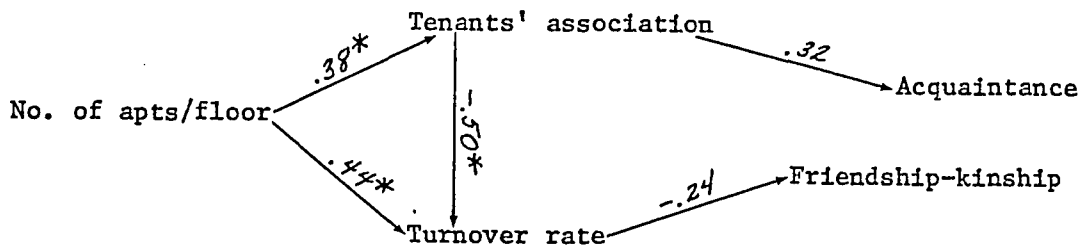


Figure 5.2

Relation of Number of Apartments per Floor and
Intervening Variables to Friendship-Kinship
and Acquaintance

(Source: Tables 5.1, 5.2, 5.4, and 5.5)

⁵The criteria for determining which variables to include in the diagram were described earlier in this chapter. The one slight difference is that this and subsequent diagrams focus on particular independent variables in turn.

It can be concluded then that, counter to the implications of Newman (1972), Cooper (1970, 1972), and the Smithsons (1960), and others who have suggested that residents in high-rises experience more social isolation from one another than do residents in low-rise buildings (Boyd, et al, 1965), the number of apartments on a floor has no direct effect in this study on the levels of acquaintance or friendship-kinship. This physical design feature does, however, have a positive indirect effect on the level of acquaintance via tenants' association and a negative indirect effect on the level of friendship-kinship via turnover rate.

In other words, the level of acquaintance is higher in sites with tenants' associations, and tenants' associations are more likely to exist in the high-rise than in low-rise buildings so that, in this indirect way, number of apartments per floor has a positive effect on the level of acquaintance. The level of friendship-kinship is lower in sites with high turnover rates, and high turnover rates are more prevalent in high rises than in low rises so that, in this indirect way, number of apartments per floor has a negative effect on the level of friendship-kinship.

Social Characteristics

Only one social characteristic has a direct effect on friendship-kinship or acquaintance: that is the positive and significant effect of percent AFDC on friendship-kinship, as shown in Figure 5.3. This positive relationship is not surprising given the likelihood that single mothers who are not working probably spend much of their time

in or near the development and therefore have the opportunity and the inclination to develop close relationships with other residents. This relationship is also consistent with the urban neighborhoods study of Kasarda and Janowitz (1974) showing that individuals of lower economic status tend to have a larger proportion of friends and relatives living in the local community.

The positive relationship between percent AFDC and friendship-kinship is significant given the implication in some writings that planned residential environments with a high percent of poor or welfare families often suffer from a lack of mutual knowledge and intimacy among residents (Rainwater, 1966; Moore, 1969; Cooper, 1972; McCarthy and Saegert, 1976). These earlier studies however were conducted in public housing projects. The results of this study indicate that in moderate-income developments, where the percent of AFDC families ranges from 0 to 50 percent and the mean across sites is 12 percent, the proportion of single-parent, welfare families has a positive, not a negative, effect on the level of intimacy and mutual knowledge among residents.

The percent of heads-of-household aged 20-35 has a slight indirect negative effect on level of acquaintance via tenants' association, $p = (-.22)(.32) = -.07$, which, however, is not large enough to be considered of importance. The indirect effect on friendship-kinship via tenants' association and turnover rate is even smaller: $p = (-.22)(-.50)(-.24) = -.03$. Thus the only relationship of importance in Figure 5.3 is between percent AFDC and the level of friendship-kinship.

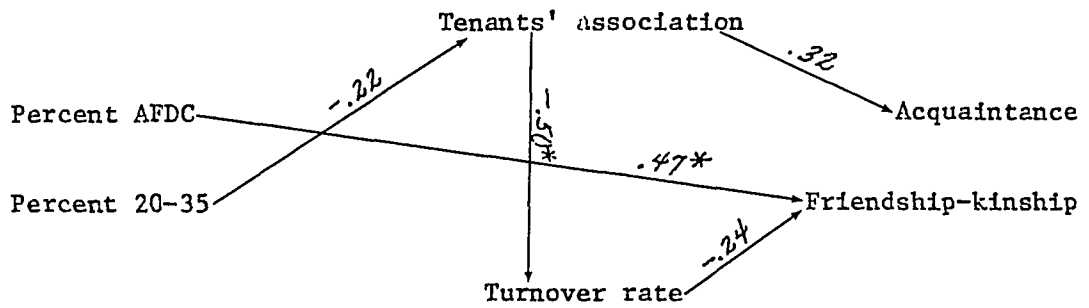


Figure 5.3

Relation of Social Characteristics and Intervening Variables to Friendship-Kinship and Acquaintance
(Source: Tables 5.1, 5.2, 5.4, and 5.5)

Homogeneity of the Population

Figure 5.4 illustrates the direct and indirect effects of two types of population homogeneity on friendship-kinship. The direct negative effect of economic homogeneity on the level of friendship-kinship is unexpected in light of the ideas of Gans (1968), McFall (1974), and Keller (1966), who posit that economic heterogeneity will discourage rather than promote friendship among residents. Yet one cannot state conclusively, on the basis of this finding, that economic heterogeneity does promote friendship, since friendship bonds were measured together with kinship bonds. The negative relationship can nonetheless be considered suggestive and does cast serious doubt on the belief that economic heterogeneity will discourage close relationships among residents in a planned residential environment. The indirect effect of age homogeneity on friendship-kinship via turnover rate is small: $p = (.28)(-.24) = -.07$.

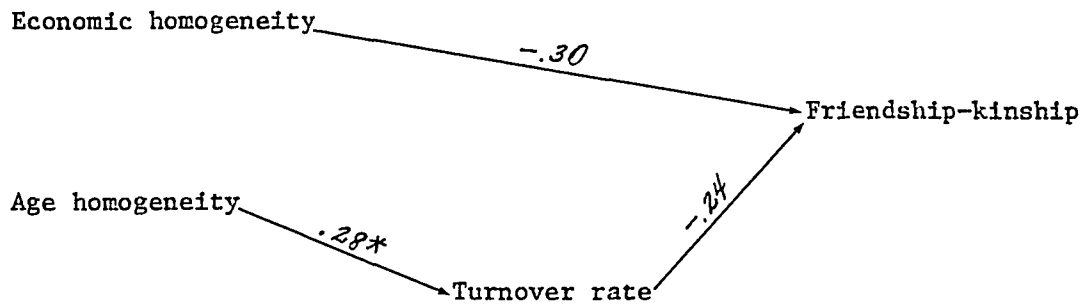


Figure 5.4

Relation of Population Homogeneity and Turnover Rate to Friendship-kinship
(Source: Tables 5.2 and 5.4)

What is interesting, and again suggestive, is that no form of population homogeneity in this study affects the level of acquaintance. And both types of population homogeneity that affect the level of friendship-kinship have the opposite effect from the one predicted. Rather than discouraging this form of social interaction among residents, both age and economic heterogeneity show signs of encouraging it.

Cooperative and Age of Site

Whether a site is a cooperative or not has a significant positive direct effect on the level of both forms of social interaction, as Figure 5.5 illustrates. Age of site has a significant positive direct effect on level of acquaintance. Neither of these site characteristics has indirect effects on friendship-kinship or acquaintance. That being a cooperative has such a strong impact on the level of social interaction supports and strengthens Cooper's statements about St. Francis Square (1970) and indicates that it is this feature of these residential environ-

ments, more than their homogeneity or heterogeneity, that has the greatest impact on the level of social interaction among residents.

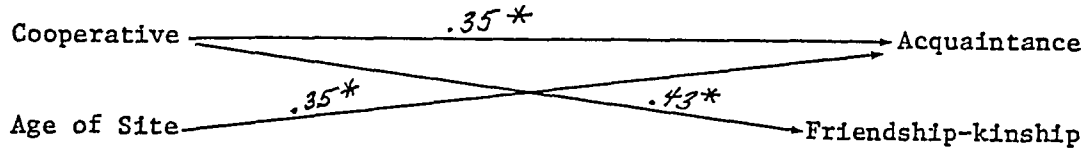


Figure 5.5

Relation of Cooperative and Age of Site to
Friendship-kinship and Acquaintance
(Source: Tables 5.4 and 5.5)

Part Three: Use of Shared Space

According to the ideas of Newman (1972, 1973, 1976) and Cooper (1970, 1972), the extent to which residents will use the areas outside their apartments that they share with other residents will vary inversely with the number of families who share those areas.

In the sites studied in this research, the larger the number of apartments on each floor, the larger is the number of families sharing public spaces inside and immediately adjacent to the building. Thus, the number of apartments on a floor can be used as an indicator of the number of families who share the public spaces in a site and, as such, is expected to have a negative effect on the level of residents' use of shared space. One would also expect that the larger the proportion of families with minors and the larger the percent of heads-of-household aged 20 to 35, the higher the level of residents' use of shared space since it is young families with children who are most likely to use

shared space most extensively (Newman, 1973, 1976; Cooper, 1975). The effects of other site characteristics and intervening variables can also be explored.

Overview of Results on Use of Space

Each site was scored according to residents' mean score on the use of space index, which was composed of two items from the questionnaire. The index measures the total number of activities a resident reported. The items in the index were:

- J10. Do you ever use the area just outside this building for sitting by yourself? For sitting with other residents you know? For sitting with members of your family or friends from outside the development? For playing with your children or watching them play? For having a barbecue or picnic? (Yes or no to each activity)
- J12. Do you use areas in this building for sitting by yourself or with others? For chatting with other residents? For playing with children or watching them play? (Yes or no to each activity).

Table 5.6 shows the path coefficients for use of space with the predictor variables that were retained in the revised model. As predicted, the number of apartments on a floor has a significant negative direct effect on the level of residents' use of space. The other significant direct effect on use of space is produced by the age of site: older sites have significantly higher levels of use of space than newer sites.

The percent of heads-of-household aged 20 to 35 has a strong positive direct effect, but the percent of households with minors has no effect. Age homogeneity has a negative direct effect: sites whose populations are heterogeneous with respect to age have higher levels of space use than do sites with age-homogeneous populations. Sites that are cooperatively-owned also have higher levels of space use than do

sites not cooperatively owned. One somewhat puzzling direct effect is from turnover rate. Turnover rate has a positive effect on use of space: the higher the turnover rate, the higher the level of shared-space use.

Table 5.6

Level of Residents' Use of Space as Predicted
by Site Characteristics
and Intervening Variables

| I Site Characteristics | Use of space | |
|--------------------------|--------------|-------|
| | r | D |
| No. of apts. per floor | -.33 | -.39* |
| Percent aged 20 to 35 | .28 | .28 |
| Racial homogeneity | .07 | .13 |
| Age homogeneity | .08 | -.22 |
| Cooperative | -.01 | .21 |
| Age of Site | .28 | .39* |
| <hr/> | | |
| II Intervening Variables | | |
| Turnover rate | .20 | .24 |
| Victimization rate | .37 | .15 |
| | $R^2 = .27$ | |

As was the case for friendship-kinship and acquaintance, the predictor variables do not explain very much of the variance in use of space: $R^2 = .27$. One can conclude, therefore, that residents' use of space is quite independent of the site characteristics and the intervening variables that have been included in this theoretical model. Use of space, like friendship-kinship and acquaintance, is not strongly determined by the features of community life that are of theoretical importance as predictor variables in this study. It remains to be seen, however, if these three types of community activity are important causal antecedents of community sentiment, for that, also, is their role in

the model.

Number of Apartments on a Floor and Social Characteristics

The number of apartments on a floor and the percent of heads-of-household aged 20 to 35 each has a significant direct effect on residents' use of space, as Figure 5.6 illustrates. Each of these site characteristics also has indirect effects via tenants' association and turnover rate. Only one of these indirect effects, however, is large enough to be considered important, and that is an unexpected one: the indirect effect of the number of apartments per floor on residents' use of space via turnover rate is positive, $p = (.44)(.24) = .11$. The more apartments on a floor, the higher the turnover rate, and in turn, the higher the level of residents' use of space.

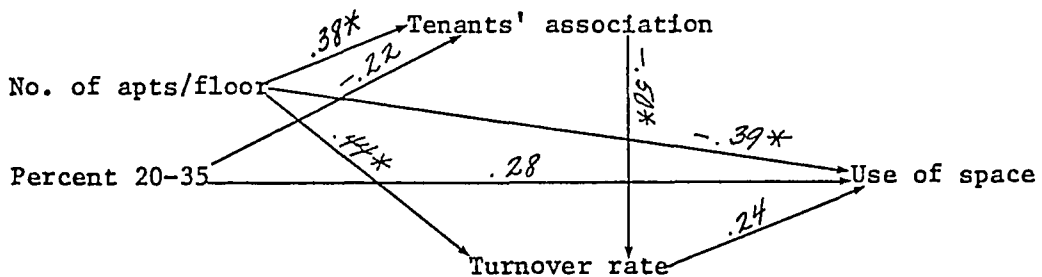


Figure 5.6

Relation of Number of Apartments per Floor,
 Percent Aged 20 to 35, and Intervening
 Variables to Use of Space
 (Source: Tables 5.1, 5.2, and 5.6)

The other indirect effects on residents' use of space illustrated in Figure 5.6 are small: percent aged 20 to 35 via tenants' association and turnover rate, $p = (-.22)(-.50)(.24) = .03$; and number of apartments

per floor via tenants' association and turnover rate, $p = (.38)(-.50)$
 $(.24) = -.50$. Thus the number of apartments per floor shows the expected
negative direct effect on residents' use of space and an unexpected
indirect effect via turnover rate that is positive.

Population Homogeneity, Cooperative, and Age of Site

Figure 5.7 presents the direct and indirect effects of age homo-
geneity, cooperative, and age of site on residents' use of shared space.

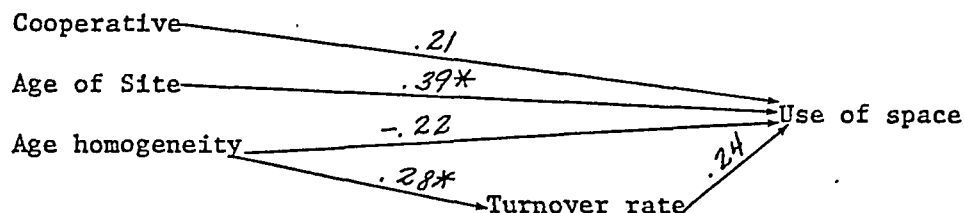


Figure 5.7

Relation of Homogeneity, Cooperative, Age of Site,
and Turnover Rate to Use of Space
(Source: Tables 5.2 and 5.6)

Again, however, the indirect effects are small. The indirect effect of
age homogeneity is through turnover rate, $p = (.28)(.24) = .07$. The
important effects of the independent variables shown in Figure 5.7 are
thus all direct: positive effects from cooperative and age of site to
residents' use of space and a negative effect from age homogeneity.

Part Four: Experience in Trying to Solve a Common Problem

The final type of community activity to be considered as a dependent variable is the level of residents' experience in getting together to try to solve a problem. This variable reflects the degree of group cohesion that residents have experienced through some rank-oriented activity. This variable is the community activity counterpart of sense of community cohesion. Given the theoretical model, it seemed likely that it would be strongly and positively affected by the existence of a tenants' association, since the purpose of such an organization is to facilitate residents' getting together to solve community problems. In the light of some of the arguments that population homogeneity can cause conflict, or at least fragmentation, in residential environments (Gans, 1968; McFall, 1974), one could expect population homogeneity to have a positive effect on this form of community activity.

Whether the physical design variable of number of apartments per floor or percent AFDC would have any effect on this form of community activity was uncertain. To the extent that these two characteristics are expected to breed a certain amount of social disorganization or isolation among residents, one could hypothesize that they would have negative effects on experience in trying to solve a common problem. On the other hand, high-rise living or a high percent of AFDC families seems to cause certain problems such as crime, vandalism, conflict over noise, etc. (Newman, 1972, 1973, 1976), and such problems could be the incentive for residents' getting together as a group. In that case, a positive impact would be expected.

The question to be answered, then, is which social characteristics and intervening variables do affect the level of experience in trying to solve a common problem, either directly or indirectly. The role that experience in trying to solve a common problem plays as an intervening variable in relation to community sentiment is examined in the next chapter.

Each site was scored according to residents' mean score at that site on an index that contained two items from the questionnaire:

- G1. Since you've been here, have residents ever gotten together to solve a problem in the development? (Yes or no)
- G6. Did you participate? (Yes or no)

The index for respondents contained three categories: the respondent reported that residents had not gotten together to solve a common problem; the respondent reported that residents had gotten together but he or she did not participate; and the respondent reported that residents had gotten together and he or she did participate.

Table 5.7 lists the path coefficients for the variable, experience in trying to solve a common problem, with the predictor variables retained in the revised model. None of the site characteristics has a significant or a substantive direct effect on experience in trying to solve a common problem. Two intervening variables, however, show significant direct effects: tenants' association has the expected positive effect and victimization rate also has a positive effect. The large size of the path coefficient for tenants' association (.71) indicates that much of the variance in experience in residents' getting together to try to solve a common problem is explained by the presence or absence of a tenants' association.

Table 5.7

Level of Experience in Trying to Solve a Common
Problem as Predicted by Site Characteristics
and Intervening Variables

| I Site Characteristics | Common Problem | |
|--------------------------|----------------|------|
| | r | p |
| No. of apts. per floor | .21 | .10 |
| Percent AFDC | -.01 | -.07 |
| Racial homogeneity | -.08 | -.18 |
| Cooperative | .30 | .16 |
| <hr/> | | |
| II Intervening Variables | | |
| Tenants' association | .77 | .71* |
| Turnover rate | -.40 | -.15 |
| Victimization rate | .04 | .32* |
| | $R^2 = .65$ | |

Victimization rate also shows a positive effect on level of experience in trying to solve a common problem. Thus communities with higher victimization rates are likely to have higher levels of such experience than are communities with lower victimization rates. This relationship suggests that the problem in many communities which residents have tried to solve involves crime or security. Preliminary analysis of item G4 ("What was the problem the last time this happened?") supports this notion. In a random sample of 50 questionnaires, 46 percent of the respondents reported that the common problem involved crime, vandalism, or security measures.

The amount of variance explained by all the predictor variables together, 59 percent, is considerably higher than the amount explained in friendship-kinship, acquaintance, or use of shared space.

Number of Apartments per Floor and Social Characteristics

Figure 5.8 is the path diagram showing the indirect effects that number of apartments per floor, percent aged 20 to 35, and percent AFDC have on the level of residents' experience in trying to solve a common problem. Each of these indirect effects is large enough to be considered important.

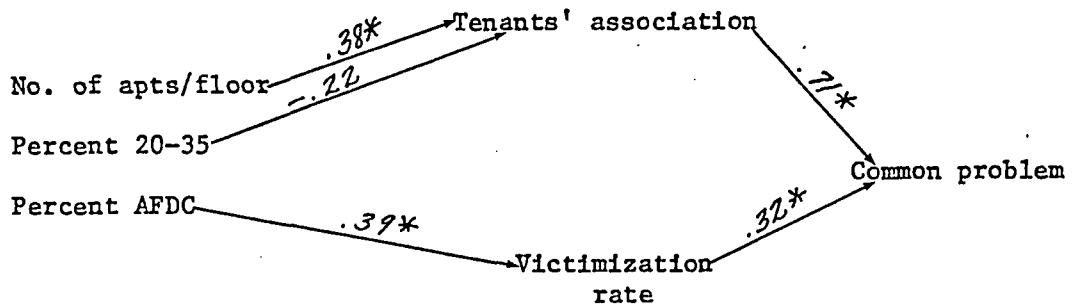


Figure 5.8

Relation of Number of Apartments per Floor,
Social Characteristics, and Intervening Variables
to Experience in Trying to Solve a Common Problem
(Source: Tables 5.1, 5.3, and 5.7)

Number of apartments on a floor has a positive and rather large indirect effect via tenants' association: $p = (.38)(.71) = .27$. The more apartments on a floor, the more likely there is to be a tenants' association, and, in turn, the higher the level of residents' experience in getting together to try to solve a common problem. Percent aged 20 to 35 also has an indirect effect via tenants' association: $p = (-.22)(.71) = -.16$. The higher the percent of young heads-of-household, the less likely there is to be a tenants' association, and, in turn, the lower the level of residents' experience in getting together to try to solve a common problem.

Percent AFDC also has an indirect effect, which is positive and is channelled through victimization rate: $p = (.39)(.32) = .12$. The higher the percent AFDC, the higher the victimization rate will be, and, in turn, the higher the level of residents' experience in getting together to try to solve a common problem. These results indicate that both the number of apartments per floor and the percent of AFDC families have positive effects on experience in getting together but that these are indirect influences channelled either through tenants' association or victimization rate. This suggests that of the two alternative expectations concerning the effects of physical design and percent AFDC, it is the second one that is supported by the data. Both these community attributes seem to function as incentives for getting together since they appear to cause certain community problems which require solutions.

Population Homogeneity, Cooperative, and Age of Site

Neither the age of a site nor whether it is a cooperative affects experience in getting together to solve a common problem, either directly or indirectly. The only type of population homogeneity having any effect is family homogeneity, as shown in Figure 5.9. The effect is direct but too small to be important: $p = (.26)(.32) = .08$.

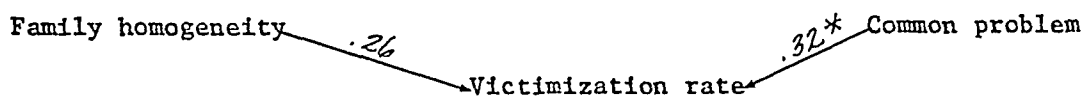


Figure 5.9

Relation of Family Homogeneity and Victimization Rate
to Experience in Trying to Solve a Common Problem
(Source: Tables 5.3 and 5.7)

CHAPTER 6

COMMUNITY SENTIMENTS

In Chapter 5 the causal antecedents and particularly the patterns of causal antecedents of four types of community activity were examined. In this chapter the pattern of relationships of site characteristics and intervening variables to four types of community sentiment are examined. The intervening variables include community conditions (tenants' association, turnover rate, and victimization rate), community activities, and two variables not yet discussed -- residents' perception of the quality of maintenance service and residents' perception of the degree of safety afforded by their site. The major purpose is to explain the variation in four types of community sentiment: attachment, responsibility, perceived influence over management, and cohesion. Each of these final outcome variables is addressed in turn, following a presentation of the results pertaining to maintenance and safety. The chapter is therefore divided into five parts: community problems, community attachment, sense of responsibility, perceived influence over management, and community cohesion.

Part One: Community Problems

In the early phases of constructing the theoretical model the paths between community activities and community sentiments were all direct paths: no intervening variables were posited between activities

and sentiments. After some initial data analysis and preliminary examination of answers to open-ended items, it became apparent that some important aspects of community life were missing from the model and that they involved concerns residents themselves express when asked what they like and dislike about their communities, namely, the quality of maintenance services and the degree of safety afforded by the site. Therefore these two variables were added to the model as "community problems" and were posited as intervening variables between activities and sentiments.

Quality of Maintenance

Newman (1972, 1973, 1976) and Cooper (1972) have described the maintenance problems that are associated with high-rise buildings and with a high proportion of AFDC families. Often poor maintenance is also associated with severe crime problems (Newman, 1972, 1973). It also seemed likely that the quality of maintenance would be affected by the proportion of families with minors and by other site characteristics.

The quality of maintenance services at each site was measured according to residents' evaluations. The following item from the questionnaire was used:

H4. How good or bad is the maintenance here at (NAME OF DEVELOPMENT)?
(1 = very bad; 2 = very good)

Residents' mean score on this item for each site was used to measure the quality of maintenance at the study sites.

Table 6.1 presents the path coefficients for the perceived quality of maintenance as predicted by the site characteristics and intervening variables that were retained in the revised model. The results

clearly support the ideas of Newman and Cooper: the quality of maintenance is significantly and negatively affected by the number of apartments on a floor and by the proportion of AFDC families.

Table 6.1

Level of Perceived Quality of Maintenance
as Predicted by Site Characteristics and
Intervening Variables

| I Site Characteristics | Quality of Maintenance | |
|--------------------------|------------------------|-------|
| | r | p |
| No. of apts. per floor | -.25 | -.24* |
| Percent AFDC | -.61 | -.49* |
| Percent with minors | -.32 | -.10 |
| Percent aged 20 to 35 | -.08 | .13 |
| Racial homogeneity | -.09 | .16 |
| Cooperative | .46 | .39* |
| <hr/> | | |
| II Intervening Variables | | |
| Victimization rate | -.43 | -.25 |
| Friendship-kinship | .08 | .17 |
| Acquaintance | .32 | .04 |
| Common problem | .04 | -.06 |
| $R^2 = .57$ | | |

The quality of maintenance is also significantly affected by whether the site is a cooperative: sites where residents own their apartments report better maintenance services than sites where residents rent their apartments. And, finally, a negative relationship is apparent between victimization rate and quality of maintenance services: the higher the victimization rate, the poorer the quality of maintenance. Overall, the amount of variance explained by the predictor variables is moderately high: 57 percent.

Figure 6.1 presents the path diagram for the relation of quality of maintenance to site characteristics and victimization rate.¹ What can be seen in Figure 6.1, besides the direct effects that number of apartments per floor, cooperative, and victimization rate have on maintenance, is that the percent AFDC affects the quality of maintenance both directly and indirectly, via victimization rate. The indirect effect, however, is too small to meet the size criterion adopted in this study, $p = (.39)(-.25) = -.10$. The indirect effect of family homogeneity via victimization rate is also too small to be considered important, $p = (.26)(-.25) = -.07$.

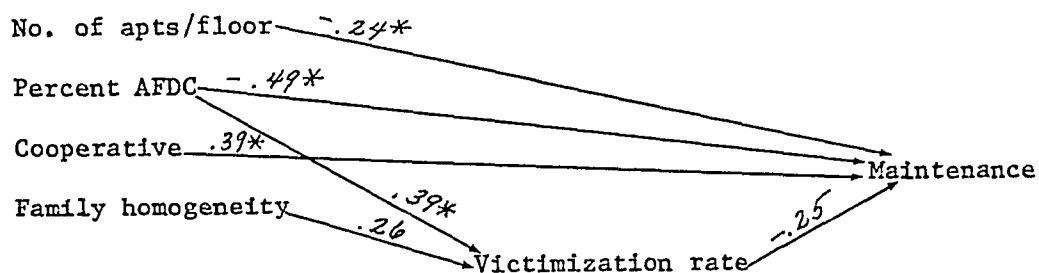


Figure 6.1

Relation of Site Characteristics and Victimization Rate to Quality of Maintenance
(Source: Tables 5.3 and 6.1)

Thus the important effects on perceived quality of maintenance are all direct effects from site characteristics: negative effects produced by number of apartments per floor and percent AFDC and a positive effect produced by the variable cooperative.

¹The criteria for determining which variables to include in such a path diagram were given in Chapter 4 and in Chapter 5.

Safety

Newman's work (1973) suggests that both the number of apartments on a floor and the percent of AFDC families have direct negative effects on residents' feelings of safety. According to Newman's design guidelines (1976), mixing age groups of family types should also have a negative impact on residents' feelings of security. One would also expect that the victimization rate in a site would affect the level of perceived safety. And, finally, the theoretical model devised suggests that community activities, such a friendship-kinship or acquaintance, might also affect residents' perception of safety.

The level of perceived safety at each site was measured according to residents' mean score on the following item from the questionnaire:

- B4. How safe or unsafe is (NAME OF DEVELOPMENT) as a place to live?
By safe, I mean safe from crime.
(1 = very unsafe; 5 = safe)

Table 6.2 lists the path coefficients for perceived safety with the site characteristics and intervening variables that were retained in the revised model. As expected, number of apartments on a floor, percent of AFDC families, and victimization rate all have significant negative direct effects on perceived safety. That is to say that the more apartments there are on a floor, the higher the percent of AFDC families, and the higher the victimization rate, the lower the level of perceived safety will be. None of the four types of homogeneity has a significant or a substantive effect on perceived safety. The presence of a tenants' association, however, has a positive direct effect, and the level of friendship-kinship has a significant positive direct effect on perceived safety. The level of acquaintance, however,

has a significant negative direct effect on perceived safety. These two forms of social activity have opposite effects on residents' feelings of safety: the higher the level of friendship-kinship, the higher the level of perceived safety is, but the higher the level of acquaintance, the lower the level of perceived safety is.

Table 6.2

| Level of Perceived Safety as Predicted by Site Characteristics and Intervening Variables | | | |
|---|------------------------|-------------|-------|
| | | Safety | |
| I | Site Characteristics | r | |
| | | P | |
| | No. of apts. per floor | -.36 | -.47* |
| | Percent AFDC | -.71 | -.80* |
| | Family homogeneity | .12 | .19 |
| | Economic homogeneity | -.35 | -.13 |
| II | Intervening Variables | | |
| | Tenants' association | -.02 | .36 |
| | Turnover rate | -.15 | .16 |
| | Victimization rate | -.37 | -.32* |
| | Friendship-kinship | .16 | .49* |
| | Acquaintance | .06 | -.38* |
| | Common problem | -.12 | -.24 |
| | | $R^2 = .64$ | |

Thus it appears that although the presence of close friends and relatives increases residents' feelings of safety, the extent of casual interaction decreases the level of perceived safety. It may be that having close friends and relatives nearby increases feelings of security, whereas casual interaction (particularly communication) without the benefit of intimacy increases residents' awareness of the possibility

of crime or the occurrence of crime without providing them with the feelings of support that friendship or kinship ties provide. The level of experience in trying to solve a common problem also appears to increase the level of fear.

Figure 6.2 is the path diagram that summarizes the most important direct and indirect effects on perceived safety. Unlike the diagram for maintenance, this diagram depicts only those direct effects that are statistically significant and only those indirect effects that are greater than .10. The reason for presenting only the summary figure for perceived safety is that since it is not important in the model as a dependent variable but rather as an intervening one, it is not worth devoting the time and space to presenting and discussing the many direct and indirect effects that impinge upon it, only some of which prove to be of substantive importance.

The number of apartments on a floor has a significant negative direct effect on perceived safety. This effect is not accounted for by victimization rate since the effect of victimization rate on perceived safety has been partialled out. The effect of this physical design feature on perceived safety is thus independent of victimization rate. One can conclude that the level of perceived safety is higher in low-rise than in high-rise buildings regardless of the victimization rate. Number of apartments on a floor also has an indirect effect via tenants' association that is positive: $p = (.38)(.36) = .14$.

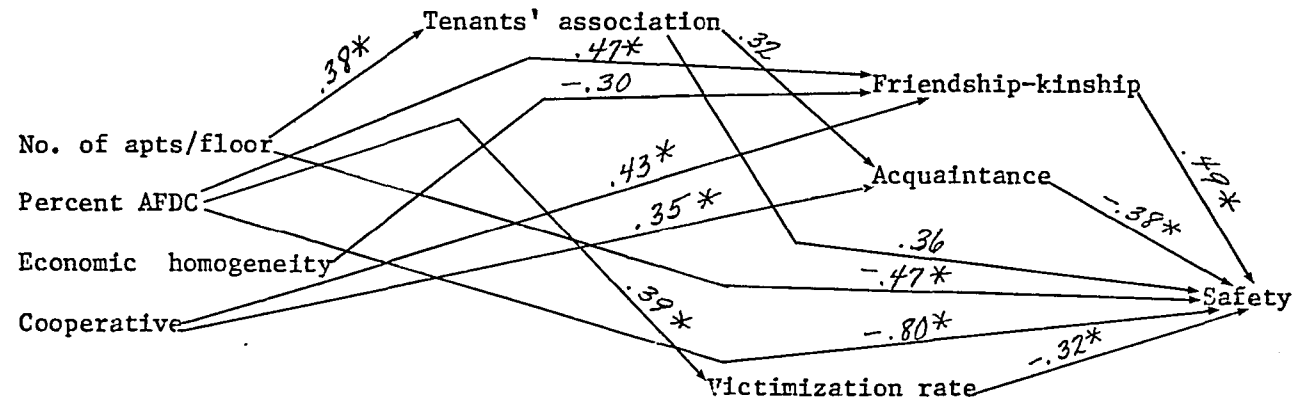


Figure 6.2

Relation of Important Causal Antecedents
to Perceived Safety
(Source: Figures 5.1, 5.9, and Table 6.2)

To some extent this positive effect counteracts the direct negative effect of number of apartments per floor but only slightly since the indirect effect is so much smaller than the direct effect. The total causal effect of number of apartments per floor on perceived safety that is accounted for by major paths is the direct effect (-.47) plus the indirect effect via tenants' association (.14), which equals -.33. This is still a substantial negative relationship.

The percent of AFDC families has a significant negative direct effect on perceived safety that is also not accounted for by victimization rate, since the effect of victimization rate is being held constant when the direct effect of percent AFDC is computed. The percent of AFDC families has an indirect effect via victimization rate that is also negative: $p + (.39)(-.32) = -.12$. Percent AFDC, however, also has a fairly large indirect effect on perceived safety that is positive: this is via its effect on the level of friendship-kinship, $p = (.47)(.49) = .23$. Thus a high proportion of AFDC families leads to a high level of friendship-kinship, which, in turn, leads to a high level of perceived safety despite the strong negative impact that percent AFDC has on perceived safety directly. Thus the total causal effect of percent AFDC on perceived safety accounted for by major paths is lower than the direct effect because the intervening variable of friendship-kinship is counteracting, to some extent, the two other negative effects: total causal effect $= (-.80) + (-.12) + (.23) = -.69$.

Economic homogeneity does not affect perceived safety directly but it does affect it indirectly via friendship-kinship: $p = (-.30)(.49) = -.15$. Thus economically heterogeneous sites have higher levels of friendship-

kinship which, in turn, cause higher levels of perceived safety.

Whether a site is a cooperative has two indirect effects on perceived safety: one positive via friendship-kinship, $p = (.43)(.49) = .21$; and one is negative via acquaintance, $p = (.35)(-.38) = -.13$. In a sense the two effects balance each other and the total causal effect of cooperative on perceived safety via major paths of influence is therefore quite small: $(.21) + (-.13) = .07$.

Part Two: Community Attachment

The first type of community sentiment to be examined is residents' sense of attachment to the development. This sense of belonging, or commitment, has been considered a very important ingredient of community. Indeed, attachment is sometimes equated with sense of community (Kasarda & Janowitz, 1975), and a presumed loss of attachment to geographical areas has been used to argue that local community is no longer a meaningful unit (Webber, 1964). Given this emphasis on attachment, it is of considerable theoretical interest to see which site characteristics and which intervening variables are the important causal antecedents of attachment in this study and in what ways, directly or indirectly, positively or negatively, they affect attachment.

The Smithsons (1968) and Van Eyck (1961) view the form of transition spaces as one way to sustain a feeling of belonging. Presumably, the more intimate or personal the transition space, the greater the sense of belonging would be. One would expect, then, that the smaller the number of apartments sharing a floor, the greater the sense of attachment would be. Newman implies that where the space adjacent to

the apartment is shared by a small number of families, residents' attachment to the community will be greater than where the space is shared by a large number of families (Newman, 1972, 1973, 1976). Cooper (1970, 1972) has pointed to the small number of families on each floor at St. Francis Square and the large number at Geneva Towers as important determinants of residents' sense of well-being in those environments.

It is also likely, however, that the quality of maintenance and the level of perceived safety, which are directly and negatively related to the number of apartments per floor, would also determine degree of attachment and would explain the expected relationship between this design feature and attachment.

Whether a site is a cooperative may have a positive effect on attachment (Cooper, 1970). Population homogeneity, according to some writers (Gans, 1968; McFall, 1974), has a positive effect on sense of community and therefore would be expected to have a positive effect on attachment.

Previous research on community indicates that attachment is positively related to the friendship-kinship bonds in the community (Kasarda & Janowitz, 1974; Hunter, 1974, 1975) and to acquaintance or informal neighboring. Indeed these three dimensions of community, friendship and kinship bonds, neighboring, and attachment, have been traditionally treated as the most important elements of community.

Overview of Results on Attachment

The index measuring attachment consisted of four items:

- A13. Suppose it wasn't possible for you to live here anymore and you had to move out of (NAME OF DEVELOPMENT), how sad or happy would you be to leave?
(1 = very happy; 5 = very sad)
- B1. On the whole, how good or bad is (NAME OF DEVELOPMENT) as a place to live?
(1 = very bad; 5 = very good)
- B3. What do most people from around (NAME OF CITY) who have heard of (NAME OF DEVELOPMENT) think of it? How good or bad a place to live do they think it is?
(1 = very bad; 5 = very good)
- C5. Right now, if you could have your way about it, how likely is it that you would move out of this development?
(1 = very unlikely; 5 = very likely)

Each site was scored according to residents' mean score at that site on this index.

Table 6.3 shows the path coefficients for community attachment with the site characteristics and the intervening variables that were included in the revised model. (Refer to Table C6.2 in Appendix C for the corresponding results obtained with the original model). Two site characteristics have significant direct effects on level of attachment: the number of apartments on a floor has the expected negative effect, and the proportion of families with minors also has a negative direct effect. In other words, the greater the number of apartments on a floor and the higher the proportion of households with minors, the lower the level of community attachment. That no other site characteristics have significant or noticeable direct effects on level of attachment should not be overlooked. No form of population homogeneity nor whether a site is a cooperative directly affects the level of attachment.

Table 6.3

Level of Community Attachment as Predicted
by Site Characteristics and
Intervening Variables

| | | Attachment | |
|--------------------------|------|-------------|--|
| I Site Characteristics | r | p | |
| No. of apts. per floor | -.59 | -.42* | |
| Percent AFDC | -.57 | .02 | |
| Percent with minors | -.32 | -.18* | |
| Age homogeneity | .12 | .12 | |
| Age of site | -.07 | -.13 | |
| II Intervening Variables | | | |
| Friendship-kinship | -.02 | -.30* | |
| Acquaintance | .43 | .46* | |
| Common problem | .08 | .14 | |
| Maintenance | .68 | .20* | |
| Safety | .68 | .30* | |
| | | $R^2 = .83$ | |

Although only two site characteristics show significant direct effects, a total of four intervening variables do so. Level of acquaintance, perceived quality of maintenance, and perceived safety all have significant positive effects, as expected. The level of friendship-kinship bonds, however, has a significant negative effect on attachment: the higher the level of these bonds is in a site, the lower the level of attachment. Yet the higher the level of acquaintance is, the higher the level of attachment. The reason for this difference is not clear. It may be that ties to friends, or more likely to relatives, involve demands that cause residents to wish to leave the development in order to be free of those demands. Acquaintance, on the other hand, may provide a degree of social interaction that enhances peoples' lives, as suggested

by its positive effect on attachment, without making demands on them. It may also be that ties to close friends and relatives in a residential environment reduce residents' privacy and, therefore, have a negative effect on attachment. At this point, however, one can only speculate on the reasons for this anomalous finding.

Overall, the amount of variance explained by the predictor variables is considerable (83 percent). Indeed, the amount of variance in attachment explained by the predictor variables is greater than for any other dependent variable in this study.

In the following sections of this part of the chapter, the effects of each group of site characteristics on attachment will be explored in turn: number of apartments on a floor, social characteristics, homogeneity of the population, and, finally, cooperative and age of site. Each path diagram will include the site characteristics that are being discussed in that section.

Number of Apartments on a Floor

As shown in Figure 6.3, the number of apartments on a floor has several indirect effects on attachment, in addition to the significant negative direct effect noted above. The strongest indirect effect is via perceived safety: $p = (-.47)(.30) = -.14$. Thus the more apartments there are on a floor, the lower the sense of safety, which, in turn, causes a low level of attachment. This indirect effect of the number of apartments on a floor is in addition to, and independent of, the direct effect of this physical design feature on attachment.

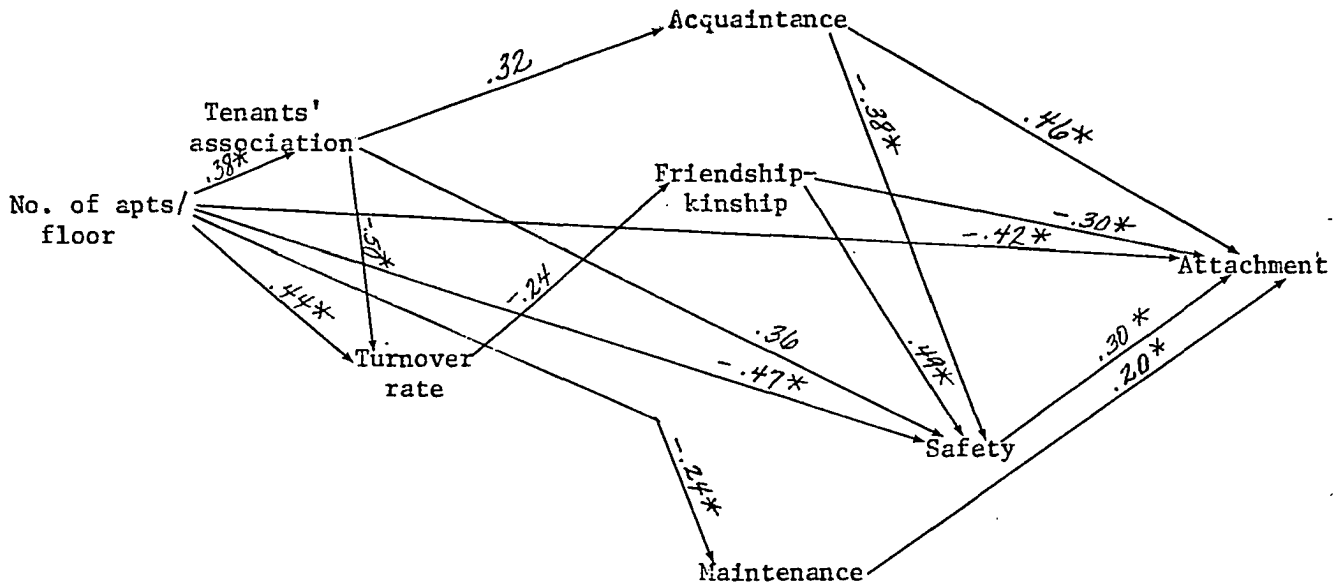


Figure 6.3

Relation of Number of Apartments per Floor and Intervening Variables to Attachment
 (Source: Tables 5.2, 5.3, 6.1, 6.2, and 6.3)

The indirect effect via quality of maintenance is also negative but is much smaller: $p = (-.24)(.20) = -.05$. This effect is also in addition to and independent of the direct effect of number of apartments per floor on attachment. Thus, neither perceived safety nor quality of maintenance explains the negative effect that this design feature has on attachment. As far as this model goes, the data support the implications of Newman (1972, 1973, 1976) and Cooper (1970, 1973, 1976) that small groupings of dwellings can enhance residents' attachment to and identification with their residential environment. That this relationship persists when other possible confounding influences (such as differences in population characteristics between sites) and other possible explanations (differences in perceived safety) are held constant, gives greater weight to the conclusion that the size of the group of dwellings is in and of itself important in determining degree of attachment. It is nevertheless possible that in future research other explanations and the corresponding intervening variables could be introduced to explain this relationship.¹

Additional indirect effects from number of apartments per floor to attachment can be traced in Figure 6.3 but they are all very small. Only two of them are larger than .03: a positive effect via tenants' association and acquaintance, $p = (.38)(.32)(.46) = .06$; and a positive effect via tenants' association and safety, $p = (.38)(.36)(.30) = .04$.

In sum, the number of apartments on a floor shows two important

¹ Density rather than group size can also be used to explain the relationship. Unfortunately this does not constitute a true rival hypothesis since number of apartments per floor is both a measure of floor density and of group size.

effects on attachment, both of which are negative: a direct effect and an indirect effect via perceived safety. The total causal effect of this physical design feature on attachment is quite large and negative: the sum of direct and indirect effects is $-.55$.

Social Characteristics

The only social characteristic with a significant, or even a noteworthy, direct effect on attachment is percent of households with minors: the higher the percent, the lower the level of attachment. As shown in Figure 6.4, however, other social characteristics, particularly the percent of AFDC families, have indirect effects on attachment.

The percent of heads-of-household aged 20 to 35 has three indirect effects on attachment that are all channelled through tenants' association and at least one other intervening variable. None of them, however, is larger than $.03$.

A particularly interesting set of substantive indirect effects can be traced from percent AFDC to attachment. The fact that the zero-order correlation between these two variables is quite high ($r = -.57$) but the direct effect is negligible ($p = .02$) is a clue to the possible existence of a number of large negative indirect effects.

Examination of Figure 6.4 indicates that there are a total of six indirect effects that percent AFDC has on attachment. The strongest of these is via perceived safety and is quite large for an indirect effect: $p = (-.80)(.30) = -.24$. Thus, part of the reason that percent AFDC and attachment are so highly correlated is that a high percent AFDC causes a low level of perceived safety that, in turn, causes low attachment. The

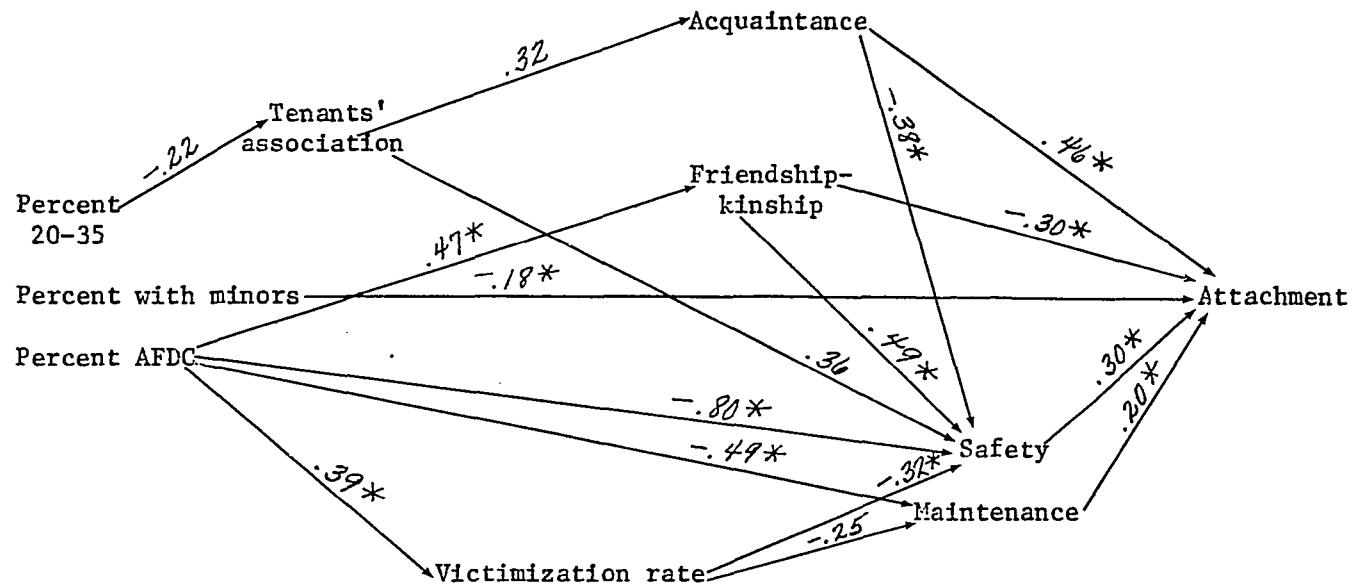


Figure 6.4

Relation of Social Characteristics and
Intervening Variables to Attachment
(Source: Tables 5.3, 5.4, 6.1, 6.2, and 6.3)

negative indirect effect via maintenance is not quite large enough to be considered important: $p = (-.49)(.20) = -.10$. Nevertheless, the trend is that a high percent of AFDC families leads to poor maintenance services which, in turn, causes low attachment. Two additional but very small negative effects can be traced through victimization rate and safety ($p = -.04$) and through victimization rate and maintenance ($p = -.02$).

Friendship-kinship is another important intervening variable in the percent AFDC-attachment relationship. The negative indirect effect via friendship-kinship is large enough to be considered substantive: $p = (.47)(-.30) = -.14$. Thus, sites with higher proportions of AFDC families have higher levels of friendship-kinship which, in turn, seem to cause lower levels of attachment. Friendship-kinship, however, also accounts for the only indirect effect of percent AFDC on attachment that is positive: this is via friendship-kinship and safety, but it is small, $p = (.47)(.49)(.30) = .07$.

Thus whatever causal relationship there is between percent AFDC and level of attachment is accounted for by a number of negative indirect effects but by virtually no direct effect. The two important indirect effects are via perceived safety and friendship-kinship although quality of maintenance just misses meeting the size criterion. The total causal effect of percent AFDC, composed of the numerous indirect effects and the very small direct effect, is quite large, $-.45$.

These results concerning safety and the trend indicated by quality of maintenance suggest that the relatively low level of attachment in communities with a high proportion of AFDC families would improve sub-

stantially if measures were taken to improve both security and maintenance services. There is a tendency for planners and researchers to think of social problems in terms of large and highly complicated issues and solutions, but the results of this study and others suggest that fairly marginal improvements to residential environments, such as increasing security or improving maintenance, can have a large impact on people's satisfaction with, and their commitment to, those environments (Kohn, Franck, and Fox, 1975).

Homogeneity of the Population

None of the four types of population homogeneity has a significant, or even a noteworthy, direct effect on community attachment. As it turns out, population homogeneity has no indirect effects of substance either. As illustrated in Figure 6.5, economic homogeneity has an indirect positive effect on attachment via friendship-kinship, but it is too small to be considered revealing: $p = (-.30)(-.30) = .09$. Age homogeneity has two even smaller indirect effects via turnover rate and friendship-kinship, $p = .02$ and via turnover, friendship-kinship, and safety, $p = -.01$.

Family homogeneity has two small indirect effects: one via victimization rate and safety, $p = -.02$; and one via victimization rate and quality of maintenance, $p = -.02$. It can be concluded, then, that in this study none of the four types of population homogeneity has any substantive effects on community attachment.

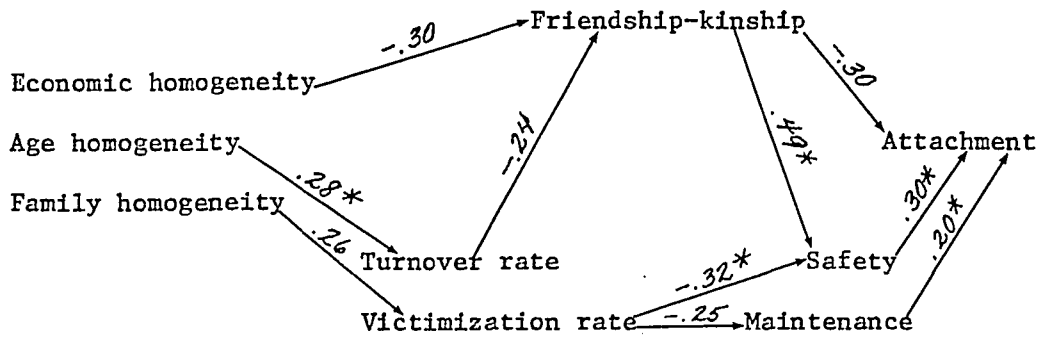


Figure 6.5

Relation of Population Homogeneity
and Intervening Variables to
Attachment

(Source: Tables 5.2, 5.3, 5.4, 6.1, 6.2, and 6.3)

Cooperative and Age of Site

Neither the age of the site (number of years it has been occupied) nor whether it is cooperatively owned has a strong direct effect on community attachment, but as Figure 6.6 shows, both these site characteristics have important indirect effects on attachment. The indirect effect of age of site on attachment is through acquaintance: $p = (.35)(.46) = .16$. Thus the older the site is, the higher the level of acquaintance which, in turn, causes a high level of attachment.

The variable cooperative has a total of five indirect effects on attachment, as shown by Figure 6.6. The strongest positive indirect effect is via acquaintance, $p = (.35)(.46) = .16$. Cooperative sites tend to have higher levels of acquaintance among residents which, in turn, cause higher levels of attachment. The variable cooperative, however, also has a comparably large negative indirect effect via friendship-kinship, $p = (.43)(-.30) = -.13$. Cooperatives also have higher

levels of friendship-kinship which lead to lower levels of attachment. There are three other small indirect effects: 1) via quality of maintenance, $p = .08$; 2) via friendship-kinship and safety, $p = .06$; and 3) via acquaintance and safety, $p = -.04$. These various indirect effects tend to balance each other so that the total causal effect of cooperative on level of attachment is quite low. The total causal effect, which is the sum of direct and indirect effects, is $.09$.

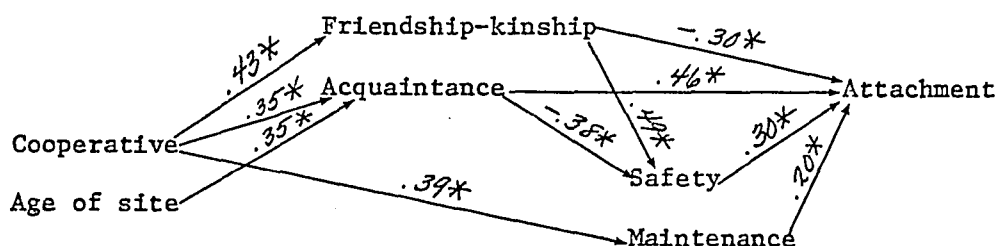


Figure 6.6

Relation of Cooperative, Age of Site, and
Intervening Variables to Attachment
(Source: Tables 5.4, 5.5, 6.1, 6.2, and 6.3)

Part Three: Sense of Responsibility

In Newman's theory of defensible space residents' assumption of responsibility for the shared areas outside their apartments is the primary way in which residents bring these areas into their "sphere of influence" (Newman, 1973). As an essential element of defensible space theory, sense of responsibility is expected to vary inversely with the number of apartments on a corridor and with the proportion of AFDC families. Research does indicate that, compared to residents in high-rise

settings, residents in low-rise settings are more likely to report that they or other residents would intervene or take some action in acts of vandalism or criminal attack (Cooper, 1972; McCarthy and Saegert, 1976). Newman's theory also suggests that for residents to feel a sense of responsibility, casual interaction or acquaintance among residents, but not necessarily close friendship bonds, is required (Newman, 1973). Both Cooper and Newman suggest that residents' use of shared space will increase the likelihood that they will assume responsibility for its safe use.

Overview of Results on Responsibility

Residents' sense of responsibility was measured by an index composed of the following three items:

- L1. Suppose three thirteen-year-old boys, who were strangers, were spray-painting graffiti on the walk just in front of this building. How likely is it that a resident of this building who saw them would tell them not to do that?
(1 = very unlikely; 5 = very likely)
- L3. If the kids kept on painting graffiti on the walk, how likely is it that the resident who saw them would call the police or management?
(1 = very unlikely; 5 = very likely)
- L8. If someone were attacked right outside this building and called out for help, how likely is it that a resident of this building would help in some way?
(1 = very unlikely; 5 = very likely)

Each site was scored according to residents' mean rating on this index. Thus the higher the mean rating, the higher the sense of responsibility at that site.

It should be recalled that the sense of responsibility among all residents is much higher than was expected: 33 percent of all the

respondents reported the maximum sense of responsibility on the index. And hence the mean for each site is also quite high. Thus the variation in this form of community sentiment is quite low. These findings alone suggest that in terms of sense of responsibility, the study sites are indeed "communities by design," or by definition. That is to say, they manifest a high sense of responsibility regardless of the differences in site characteristics among them.

The results produced by the regression analysis of sense of responsibility, using the predictor variables retained in the revised model, can be found in Table 6.4. None of the site characteristics has a statistically significant direct effect on level of responsibility and only one intervening variable has a significant direct effect. That is level of acquaintance which, as expected, has a positive effect: the higher the level of acquaintance, the higher the level of felt responsibility. Although there are few statistically significant direct effects, the percent of variance in responsibility explained by the predictor variables is not too small -- 54 percent. Two site characteristics and two intervening variables meet this study's standard of substantive importance and hence of theoretical interest. The proportion of AFDC families has, as expected, a negative direct effect on the level of responsibility and the variable age homogeneity has a positive direct effect. The level of residents' use of space and the level of perceived safety both have positive direct effects.

Table 6.4

Level of Responsibility as Predicted
by Site Characteristics and
Intervening Variables

| I Site Characteristics | Responsibility | |
|---------------------------------|----------------|------|
| | r | p |
| Percent AFDC | -.51 | -.25 |
| Percent aged 20-35 | -.18 | -.13 |
| Family homogeneity | -.15 | -.14 |
| Economic homogeneity | -.27 | -.08 |
| Age homogeneity | .15 | .23 |
| Cooperative | .23 | -.15 |
| Age of site | .06 | -.16 |
| <u>II Intervening Variables</u> | | |
| Turnover rate | -.26 | -.09 |
| Acquaintance | .58 | .46* |
| Use of space | .26 | .23 |
| Safety | .49 | .25 |
| $R^2 = .54$ | | |

Number of Apartments on a Floor

Counter to expectations, the number of apartments on a floor has no direct effect on the sense of responsibility. In the original model the direct effect was only .09 (see Table C6.3 in Appendix C) so this site characteristic was dropped from the revised model. A total of eight indirect effects from this physical design feature to sense of responsibility can be traced in Figure 6.7. Only three of these effects, however, are any larger than .03. The strongest one is via safety, $p = (-.47)(.25) = -.12$, and is large enough to meet the size criterion. The second one is via use of space, $p = (-.39)(.23) = -.09$, but does not meet the size criterion. And the third one is via tenants' associa-

tion and acquaintance and is positive but still too small to be of theoretical interest, $p = (.38)(.32)(.46) = .06$. The sum of all the indirect effects that number of apartments on a floor has on sense of responsibility shown in Figure 6.7 is quite low: $-.11$. The only conclusion that these findings support is that the number of apartments on a floor has a negative indirect effect on sense of responsibility via perceived safety but no direct effect.

That the number of apartments on a floor has so little impact on the sense of responsibility is somewhat surprising in the context of previous work. Newman's theory and previous research (Cooper, 1972; McCarthy and Saegert, 1976) suggest that a strong relationship between number of apartments on a floor and residents' sense of responsibility does exist. Why was no strong relationship shown in this study? First, Newman's theory and the research of McCarthy and Saegert (1976) address the phenomena of public housing where the percent of AFDC and other low-income families is high. It is possible that in those circumstances physical design features will have more influence on residents' sense of responsibility than in the moderate-income sites studied in this research. Thus one of the reasons for the unexpected absence of a relationship may be the difference between public housing projects and moderate-income housing developments.

However, Cooper (1972) found residents' sense of responsibility to be considerably lower in a high-rise site than in a walk-up and both developments were moderate-income. But she was not able to control for the numerous other differences between these two sites: the walk-up was a cooperative, the high-rise was not; the high-rise housed some

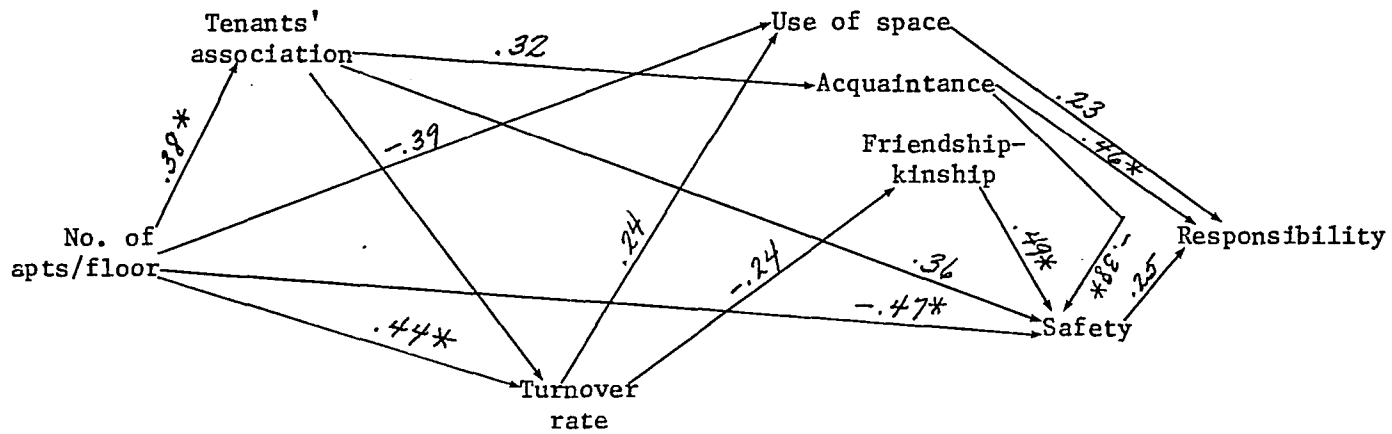


Figure 6.7

Relation of Number of Apartments per Floor and
Intervening Variables to Responsibility
(Source: Tables 5.1, 5.2, 5.4, 5.5, 5.6, 6.2, and 6.4)

AFDC families and the walk-up housed none. And, of importance in light of the direct effect of acquaintance on responsibility demonstrated in this study, the walk-up showed a higher level of acquaintance than did the high-rise. Thus it is not established that the difference in sense of responsibility Cooper found was due to physical design and not to one of these other site characteristics.

Social Characteristics

One social characteristic has a substantive direct effect on the sense of responsibility: percent AFDC, as expected, has a negative direct effect. The higher the percent of AFDC families is, the lower residents' sense of responsibility. Percent AFDC also has three indirect effects on responsibility, as shown in Figure 6.8. The one indirect effect that is large enough to be substantive is via safety, $p = (-.80)(.25) = -.20$. Thus, the higher the percent of AFDC families, the lower the level of perceived safety and, in turn, the lower the level of responsibility. The two other indirect effects are via friendship-kinship and safety ($p = .06$) and via victimization rate and safety ($p = -.03$). The total causal effect of percent AFDC on level of responsibility is the sum of the direct effect and the indirect effects or $-.34$.

Figure 6.8 also shows the indirect effects that percent aged 20 to 35 has on sense of responsibility, all of which are very small (.03 or less). In sum, percent AFDC is the one social characteristic that affects sense of responsibility, and it does so both directly and negatively and indirectly and negatively via perceived safety.

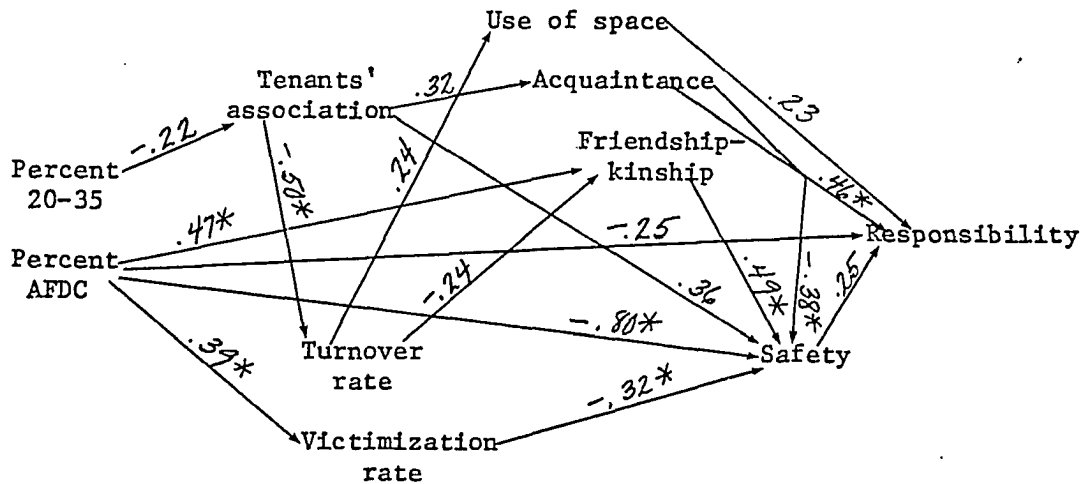


Figure 6.8

Relation of Social Characteristics and Intervening Variables to Responsibility
 (Source: Tables 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 6.2, and 6.4)

Homogeneity of the Population

The one homogeneity characteristic that affects level of responsibility substantively is age homogeneity and the effect is positive: sites with age-homogeneous populations tend to have higher levels of responsibility than do age-heterogeneous sites. This relationship is consistent with Newman's guidelines for housing racially and economically heterogeneous groups together, but keeping them homogeneous with respect to age (Newman, 1976). As shown in Figure 6.9, age homogeneity has three indirect effects on level of responsibility, but they are all small: via use of space, $p = -.05$; via turnover rate and use of space, $p = .02$; and via turnover rate, friendship-kinship, and safety, $p = -.01$.

Economic homogeneity and family homogeneity produce only very small indirect effects on responsibility. Thus the conclusion is that

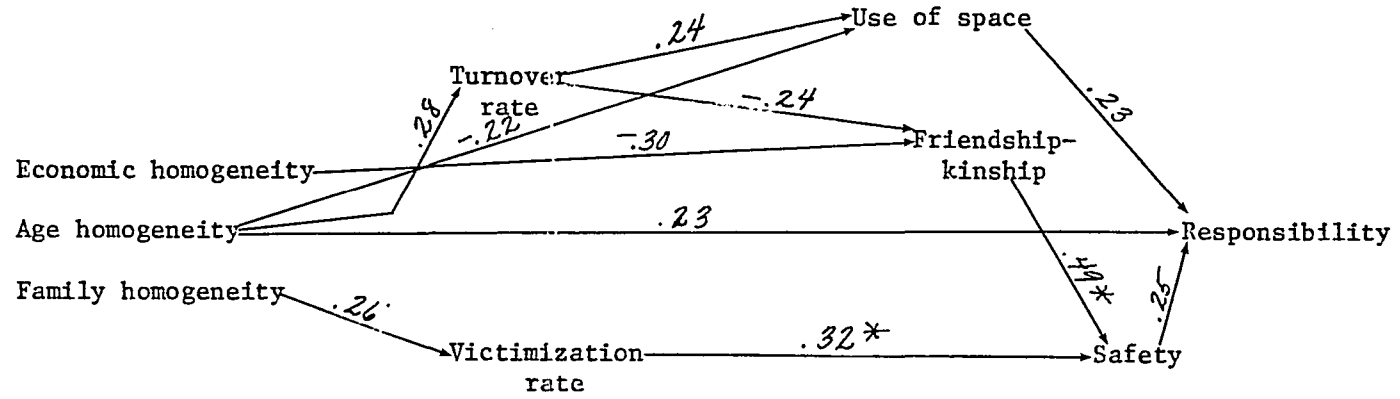


Figure 6.9

Relation of Population Homogeneity and Intervening Variables to Responsibility
 (Source: Tables 5.2, 5.3, 5.4, 5.6, 6.2, and 6.4)

age homogeneity is the only type of homogeneity that affects responsibility and its effect is direct and positive.

Cooperative and Age of Site

Neither the age of a site nor whether it is cooperatively owned has a direct effect on sense of responsibility, but both of these site characteristics have indirect effects. As shown in Figure 6.10, cooperative has a positive indirect effect via acquaintance: $p = (.35)(.46) = .16$. Cooperative also has a number of other indirect effects, but they are all small: via friendship-kinship and safety ($p = .06$); via acquaintance and safety ($p = -.03$); and via use of space ($p = .05$). Altogether the total causal effect of cooperative on level of responsibility is very small (total causal = .04). Nonetheless, the indirect effect via acquaintance is substantive and positive, and in this way whether a site is a cooperative does affect residents' sense of responsibility.

The age of the site also has a positive indirect effect on responsibility via acquaintance: $p = (.35)(.46) = .16$. It has two other small indirect effects: via use of space ($p = .09$) and via acquaintance and safety ($p = -.03$). Thus two site characteristics, cooperative and age, show strong positive indirect effects on residents' sense of responsibility, both of which are channelled through level of acquaintance. Cooperatives and older sites tend to have higher levels of acquaintance which, in turn, lead to higher levels of felt responsibility.

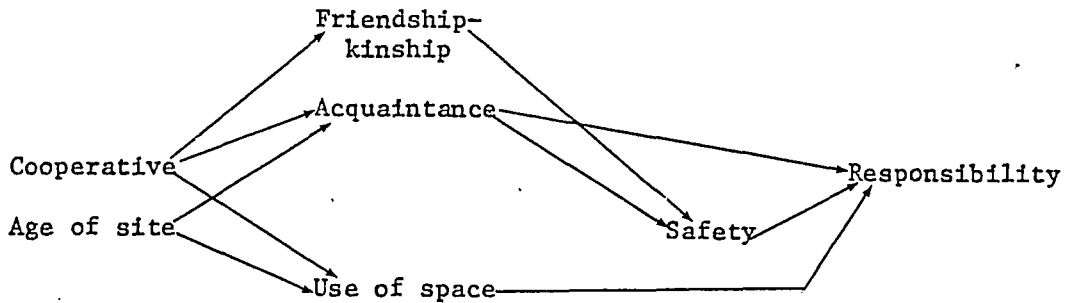


Figure 6.10

Relation of Cooperative, Age of Site and
Intervening Variables to Responsibility
(Source: Tables 5.4, 5.5, 5.6, 6.2, and 6.4)

Part Four: Perceived Influence over Management

The third type of community sentiment to be examined is residents' perceived influence over management. As described in Chapter 1, this type of sentiment is as close as this study comes to measuring residents' sense of power or efficacy with respect to their community and its conditions. Whether or not this sense of efficacy is consistent with actual power or influence is beyond the scope of this research. What can be explored, however, is how perceived influence varies with site characteristics, community conditions, and various forms of community activities.

Previous research in public housing (McCarthy and Saegert, 1976) indicates that residents' perceived influence over management is significantly higher in walk-up than in high-rise buildings. One would also expect that the percent AFDC of families, to the extent that it reflects poverty, vulnerability, and preoccupation with problems of daily living, would also have a negative effect on the level of per-

ceived influence over management. Population heterogeneity, as reflecting divergent interests and possible conflict among residents, might well have a similar negative effect on the amount of influence residents feel they have over management. Participation of residents in the site's organization, as measured by the variable presence or absence of a tenants' organization, will likely have a positive effect on residents' perceived influence over management (Hunter, 1974). Finally, a high degree of social interaction among residents would be likely to positively affect their sense of influence over management.

Overview of Results on Perceived Influence over Management

A single item from the questionnaire was used to obtain the mean level of residents' perceived influence over management at each site:

H6. Some people feel there is not much residents can do to influence what management does. How much do you agree or disagree with that idea?
(1 = strongly agree; 5 = strongly disagree)

This item was adopted from the research of McCarthy and Saegert (1976) which showed that public housing residents' sense of influence over management is significantly greater in walk-up than in high-rise buildings.

Table 6.5 contains the path coefficients for perceived influence over management with the predictor variables retained in the revised model. Three site characteristics have significant positive effects on perceived influence: number of apartments on a floor, racial homogeneity, and age of site. That residents in racially

homogeneous, older sites have a greater sense of influence over management than do residents in racially heterogeneous, newer sites is not surprising. The finding that is surprising and counter to previous findings in a study of public housing (McCarthy and Saegert, 1976) is that the more apartments on a floor, the higher the level of perceived influence over management is.

Table 6.5

Level of Perceived Influence over Management
as Predicted by Site Characteristics
and Intervening Variables

| I Site Characteristics | Perceived Influence over Management | |
|---------------------------------|-------------------------------------|-------------|
| | r | P |
| No. of apts. per floor | .28 | .41* |
| Percent AFDC | -.04 | -.10 |
| Racial homogeneity | .12 | .32* |
| Economic homogeneity | -.03 | .31 |
| Cooperative | .24 | .19 |
| Age of site | .26 | .40* |
| <u>II Intervening Variables</u> | | |
| Tenants' association | .50 | .36* |
| Turnover rate | -.34 | -.30 |
| Victimization rate | -.15 | .25 |
| Friendship-kinship | .35 | .27 |
| Acquaintance | .39 | -.20 |
| Maintenance | .21 | .31 |
| Safety | .04 | .20 |
| | | $R^2 = .47$ |

The one intervening variable that has a significant direct effect on perceived influence is tenants' association: sites with a tenants' association show a higher level of perceived influence among residents than do sites without a tenants' association.

Economic homogeneity shows a noticeable positive effect on perceived influence, as do the level of friendship-kinship and the perceived quality of maintenance. Victimization rate also shows a positive effect: the higher the rate, the greater the sense of influence. Turnover rate, however, has a negative effect: the higher the turnover rate, the lower the sense of influence. The amount of variance explained by all the predictor variables together is moderate, 47 percent.

Number of Apartments on a Floor

Figure 6.11 is the path diagram that shows the direct effect and the important indirect effects of number of apartments per floor to perceived influence over management. The number of apartments on a floor has a significant direct effect on perceived influence over management that is positive. It also has six indirect effects on level of perceived influence, two of which are large enough to be substantive. One of these is, like the direct effect, positive, and that is via tenants' association $p = (.38)(.36) = .14$. This means the more apartments there are on a floor, the more likely it is that tenants have formed an association, and the presence of a tenants' association will, in turn, increase the level of residents' perceived influence over management. The second indirect effect of substance is via turnover rate, $p = (.44)(-.30) = -.13$: the more apartments there are on a floor, the higher the turnover rate, and, in turn, the lower the level of residents' perceived influence over management. The remaining four indirect effects are all small: via tenants' association and turnover rate ($p = .06$); via quality of maintenance ($p = -.07$); via turnover rate and

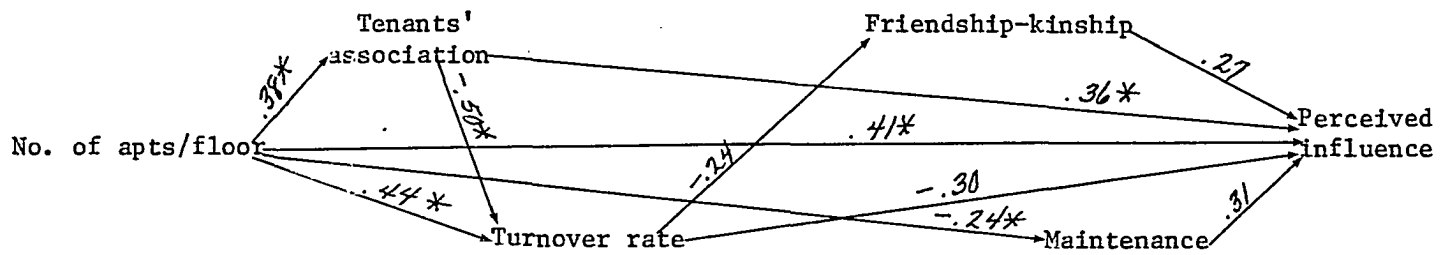


Figure 6.11

Relation of Number of Apartments per Floor and
Intervening Variables to Perceived
Influence over Management

(Source: Tables 5.1, 5.2, 5.4, 6.1, and 6.5)

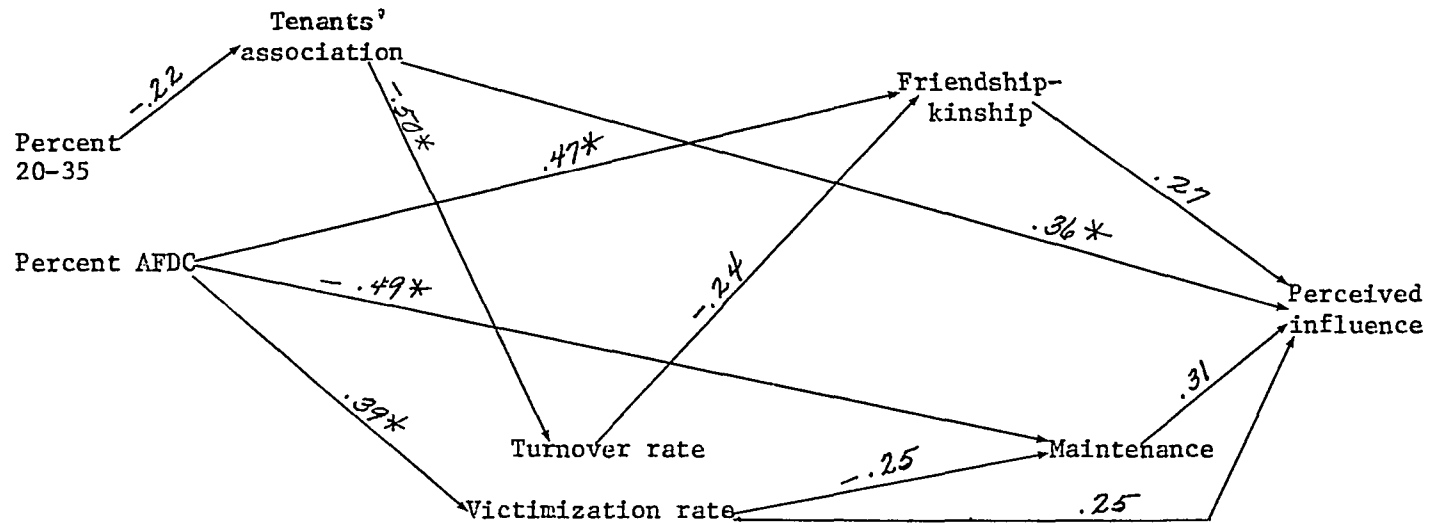
friendship-kinship ($p = -.03$); and via tenants' association, turnover rate, and friendship-kinship ($p = .01$).

In sum, there are three important effects that the number of apartments per floor has on level of perceived influence over management: a direct positive effect; an indirect positive one via tenants' association; and an indirect negative one via turnover rate. The total causal effect is large and positive, .49.

As predicted, residents' attachment was shown to vary inversely with the number of apartments on a floor. Counter to expectation, however, residents' sense of responsibility was not directly related to this physical design feature. Now, the results indicate that perceived influence over management rather than varying inversely with the number of apartments on a floor, as expected on the basis of prior research, varies directly with this design feature and significantly so. This suggests that in this study of moderate-income housing, residents in high-rise buildings, when other possible influences are held constant, have a higher level of felt influence over management than do residents in low-rise buildings. Why this should be so is not clear from the model, and hence, not from the data as analyzed. Possible explanations for this unexpected finding are discussed in Chapter 7.

Social Characteristics

None of the social characteristics of sites has a significant direct effect on perceived influence over management (see Table 6.5). Two social characteristics, however, have indirect effects, percent aged 20 to 35 and percent AFDC, as shown in Figure 6.12. The percent



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Figure 6.12

Relation of Social Characteristics and
Intervening Variables to Perceived
Influence over Management
(Source: Tables 5.1, 5.2, 5.3, 5.4, 6.1, and 6.5)

of heads-of-household aged 20 to 35 has only small indirect effects: via tenants' association ($p = -.08$) and via tenants' association, turnover rate, and friendship-kinship ($p = -.01$).

Percent of AFDC families has four indirect effects, two of which are substantive. One of the substantive indirect effects is positive via friendship-kinship: $p = (.47)(.27) = .13$. Thus the higher the percent AFDC is, the higher the level of friendship-kinship is, and, in turn, the higher the level of perceived influence over management. The other substantive indirect effect is negative and is via quality of maintenance, $p = (-.49)(.31) = -.15$. This means that the higher the percent AFDC, the lower the quality of maintenance and therefore the lower the level of perceived influence over management. The two small indirect effects are via victimization rate ($p = .10$) and via victimization rate and quality of maintenance ($p = -.03$).

Thus the one social characteristic that shows any substantive effect on perceived influence over management is percent AFDC, which shows an indirect positive effect via friendship-kinship and an indirect negative effect via quality of maintenance but no direct effect.

Homogeneity of the Population

Two types of population homogeneity have substantive direct effects on perceived influence over management, racial homogeneity and economic homogeneity. Both of these effects are positive. In other words, sites that have racially homogeneous or economically homogeneous populations have higher levels of perceived influence over management than do sites with populations that are racially or economically heterogeneous.

As shown in Figure 6.13, economic homogeneity also has an indirect effect via friendship-kinship that is negative but too small to be considered important: $p = (-.30)(.27) = -.08$. Age homogeneity has a small negative indirect effect via turnover rate ($p = -.08$) and an even smaller one via turnover rate and friendship-kinship ($p = -.02$). Family homogeneity has a small positive indirect effect via victimization rate ($p = .07$) and a negative one via victimization rate and quality of maintenance ($p = -.02$).

The conclusion is that population homogeneity has only positive direct effects on perceived influence over management and they are produced by both racial and economic homogeneity.

Cooperative and Age of Site

Whether a site is a cooperative does not have a substantive direct effect on residents' perceived influence over management although the path coefficient just misses meeting the criterion ($p = .19$). Whether a site is cooperative does, however, have two important indirect effects, both of which are positive, as shown in Figure 6.14. The first is via friendship-kinship, $p = (.43)(.27) = .12$; the second is via quality of maintenance $p = (.39)(.31) = .12$. In other words, the extent to which the level of perceived influence over management is higher in cooperatives than in non-cooperatives is not directly because of the cooperative ownership, but rather because cooperative ownership leads to a high level of friendship-kinship and to a high level of quality of maintenance each of which, in turn, causes a high level of perceived influence over management. The total causal effect of cooperative on perceived influence

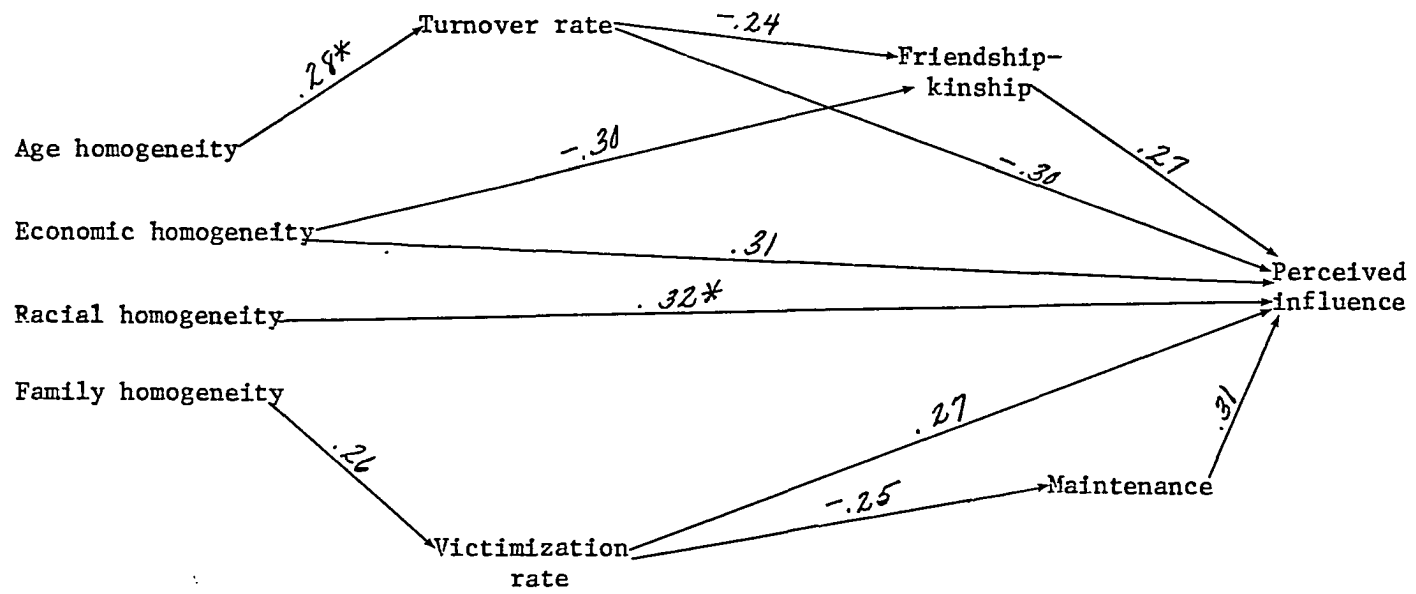


Figure 6.13

Relation of Population Homogeneity and
Intervening Variables to Perceived
Influence over Management
(Source: Tables 5.2, 5.3, 5.4, 6.1, and 6.5)

is large and positive, .43.

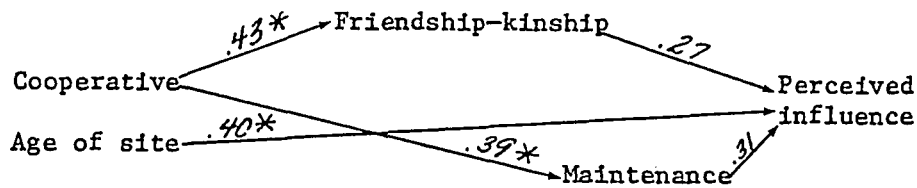


Figure 6.14

Relation of Cooperative, Age of Site, and
Intervening Variables to Perceived
Influence over Management
(Source: Tables 5.4, 6.1, and 6.5)

Finally, the age of a site has a direct and positive effect on perceived influence: residents' perceived influence over management is greater in older sites than in newer ones. This suggests that experience with management over time, which the age variable taps, has a direct impact on residents' sense of influence.

Part Five: Community Cohesion

One might conclude from reviewing the literature on community, as I did, that undue importance is attributed to community attachment as an indicator of social cohesion. The sentimental bond to a geographic area is sometimes implicitly equated with sense of community and therefore with social cohesion (Kasarda and Janowitz, 1974). As Suttles (1972) has suggested, sentimental attachment should not be viewed as the only form of social cohesion. The other form of social cohesion that seems important is the extent to which residents will join in collective action in an attempt to change conditions or prevent unac-

ceptable events from occurring. Such action is an essential ingredient of community, in my opinion. Given the nature of this research, the form and consequences of such action could not be studied directly. Instead, residents were asked whether such collective action had taken place during their period of residence; this was treated as a form of community activity. Residents were also asked to estimate the likelihood of residents' getting together in the future to try to resolve two hypothetical problems. These two questionnaire items and one other were used to construct an index of the fourth type of community sentiment, sense of cohesion.

The two most likely causal antecedents of sense of cohesion are the existence of a tenants' association and the level of previous experience in trying to solve a common problem. Since previous research and theory indicated that number of apartments per floor and percent AFDC affect sense of responsibility (Newman, 1972, 1973; Cooper, 1972; McCarthy and Saegert, 1976) and since these site characteristics were assumed to have an important influence on attachment, it was logical to expect them to have strong effects on sense of cohesion as well. Population homogeneity was hypothesized to have an effect on community sentiment in general, therefore also on sense of cohesion in particular.

Overview of Results on Cohesion

Sense of community cohesion was measured for each site by using residents' mean score on an index composed of three items from the questionnaire. The three items were:

- G1. Suppose that it took management longer and longer to fix things and (NAME OF DEVELOPMENT) began to get very run down. How likely is it that residents would get together and try to get management to improve the maintenance services?
(1 = very unlikely; 5 = very likely)
- G7. Suppose that because of budget cuts, the fire station in this area was going to be closed down. How likely is it that residents in this development would try to do something to keep the fire station open?
(1 = very unlikely; 5 = very likely)
- G9. In general, what kind of development would you say this is--one where people mostly get together to solve problems that affect everyone or one where people mostly go their own ways?
(1 = people go their own ways; 2 = some of both; 3 = people get together)

Table 6.6 presents the results of the regression analysis on community cohesion where the predictor variables were those retained in the revised model. Altogether, four site characteristics and two intervening variables show significant direct effects on community cohesion and the amount of variance explained is quite high ($R^2 = .79$).

Both the number of apartments on a floor and the percent of AFDC families have significant negative direct effects on cohesion, as expected. The negative effect of number of apartments per floor is, however, somewhat surprising given that this design feature has a significant positive effect on perceived influence over management. This difference is discussed further in Chapter 7. Family homogeneity has a significant negative direct effect on sense of cohesion: sites with populations that are heterogeneous with respect to family type (where 45 to 74 percent of the households have minors) show higher levels of cohesion than do sites that are homogeneous (less than 40 percent or more than 75 percent of the households have minors).

Table 6.6

Level of Community Cohesion
as Predicted by Site Characteristics
and Intervening Variables

| | | Cohesion | |
|----|------------------------|-------------|-------|
| I | Site Characteristics | r | p |
| | No. of apts. per floor | -.07 | -.19* |
| | Percent AFDC | -.42 | -.24* |
| | Percent with minors | -.27 | -.14 |
| | Family homogeneity | .25 | -.21* |
| | Age homogeneity | .02 | .17 |
| | Age of site | .12 | .28* |
| II | Intervening Variables | | |
| | Tenants' association | .52 | -.19 |
| | Common problem | .66 | .89* |
| | Maintenance | .46 | .21* |
| | | $R^2 = .79$ | |

The two intervening variables that show significant direct effects are level of experience in trying to solve a common problem and quality of maintenance. Both of these effects are positive: the higher the level of experience in trying to solve a common problem and the higher the perceived quality of maintenance, the greater residents' sense of cohesion is.

Number of Apartments on a Floor

Figure 6.15 depicts the direct effect and the major indirect effects that the number of apartments on a floor has on sense of community cohesion. The number of apartments per floor has a significant negative direct effect on cohesion. This physical design feature also has two

indirect effects, only one of which is substantive. The substantive one is both positive and quite large for an indirect effect: it is via tenants' association and experience in trying to solve a common problem, $p = (.38)(.71)(.89) = .24$. In other words, the likelihood of a tenants' association being formed is positively affected by the number of apartments on a floor; the level of experience in trying to solve a common problem is positively affected by the existence of a tenants' association; and, in turn, this level of experience has a direct and positive effect on residents' sense of cohesion.

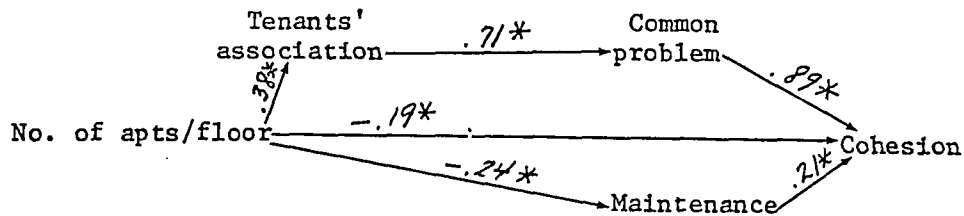


Figure 6.15

Relation of Number of Apartments per Floor and Intervening Variables to Community Cohesion
(Source: Tables 5.1, 5.7, 6.1, and 6.6)

It should be noted that these two effects of physical design on residents' sense of cohesion, the direct negative one and the indirect positive one, are independent of each other, that each is an important effect in its own right. Residents' sense of cohesion, in this study, tends to be lower in high-rise than in low-rise sites. At the same time, however, tenants' association and the consequent high level of experience in trying to solve a common problem account for an indirect

but positive relationship between this physical design feature and sense of cohesion. These two effects plus another negative indirect effect via quality of maintenance ($p = -.05$) balance each other so that the total causal impact of number of apartments per floor on residents' sense of cohesion is zero. Thus if one were only examining zero-order correlations, one might conclude that there is no relationship between this physical design feature and sense of cohesion, whereas, according to this model, there are two very important relationships, one negative and one positive.

Social Characteristics

The percent of heads-of-household aged 20 to 35 and the percent of AFDC families both have indirect effects on sense of community cohesion, as shown in Figure 6.16. Percent aged 20 to 35 has a substantial negative indirect effect via tenants' association and level of experience in trying to solve a common problem: $p = (-.22)(.71)(.89) = -.14$. This is because, as we have seen, tenants' association has a strong positive effect on common problem, which has a strong positive effect on cohesion. The new feature with respect to community cohesion is that the percent aged 20 to 35 has a negative effect on tenants' association and therefore a negative indirect effect on cohesion.

Percent AFDC has a significant negative direct effect on sense of cohesion. It also has three indirect effects one of which is substantive. That one is a positive effect via victimization rate and experience in trying to solve a common problem, $p = (.39)(.32)(.89) = .11$. Thus, while percent AFDC has a negative direct effect on cohesion, it has a positive

indirect effect through these two intervening variables. That is to say, a high percent of AFDC families leads to a high victimization rate which appears to encourage residents to try to solve a common problem (which is likely to involve the crime or security issue), and that, in turn, leads to a high level of sense of community cohesion. This is in addition to, and independent of, the direct negative effect that the percent AFDC has on cohesion.

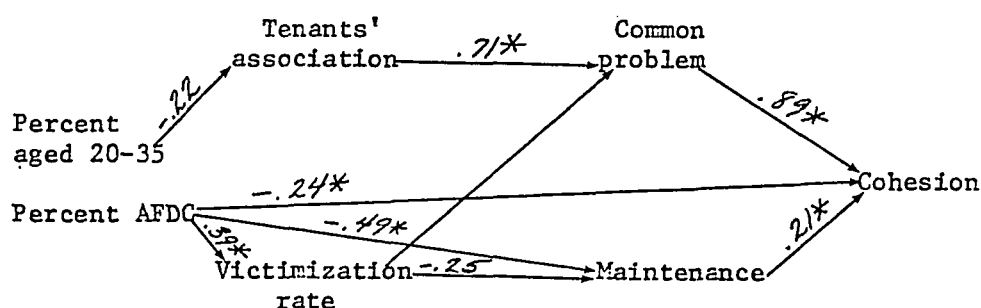


Figure 6.16

Relation of Social Characteristics and Intervening Variables to Community Cohesion
(Source: Tables 5.1, 5.3, 5.7, 6.1, and 6.6)

Percent AFDC has two other indirect effects on cohesion, both are negative and small. Via maintenance, the effect is $-.10$; via victimization rate and maintenance the effect is $-.02$.

Homogeneity of the Population

Family homogeneity is the only type of population homogeneity that shows any direct or indirect effects on cohesion. The indirect effects, however, are both small, as suggested by the path coefficients shown

in Figure 6.17. The indirect effect via victimization rate and maintenance is $-.01$ and the indirect effect via victimization rate and common problem is $.07$. The only substantial effect of family homogeneity on cohesion is thus the negative direct effect. Sites that are heterogeneous with respect to family type have higher levels of cohesion than do sites which are homogeneous.

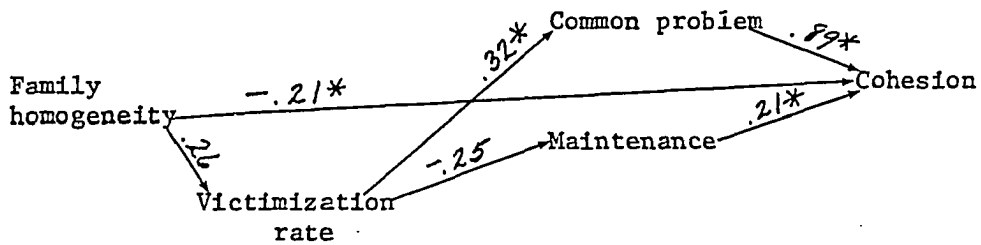


Figure 6.17

Relation of Family Homogeneity and Intervening Variables to Community Cohesion
(Source: Tables 5.3, 5.7, 6.1, and 6.6)

Cooperative and Age of Site

Whether a site is cooperatively owned has only a small indirect effect on sense of community cohesion and that is via quality of maintenance as indicated in Figure 6.18, $p = (.39)(.21) = .08$. The age of the site has a significant direct and positive effect but no indirect effects. Thus older sites have higher levels of cohesion than do newer sites but cooperatives do not have higher levels of cohesion than non-cooperatives.

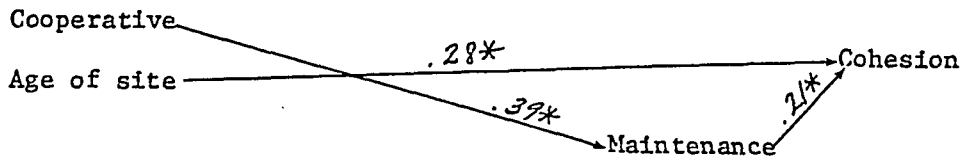


Figure 6.18

Relation of Cooperative and Age of Site
to Community Cohesion
(Source: Tables 6.1 and 6.6)

CHAPTER 7

DISCUSSION

"Community by design" refers, most importantly, to the assumption that the physical design and other site characteristics of housing developments have a powerful influence on the nature of life in these communities and on residents' sense of community. As it turns out, the results of this study bear out this assumption quite strongly.

Of the ten enduring site characteristics studied, two show more impact on community activities and sentiments than any of the others: the number of apartments grouped together and the percent of AFDC families. Whether the development is cooperatively owned, the age of the development, and the intervening variable existence of a tenants' association have considerable impact but not as much as physical design or the percent of AFDC families. Percent of households with minors, percent of heads of household aged 20 to 35, population homogeneity, and the intervening variable turnover rate do not have as much of an impact as these other attributes nor do they have as much influence as might be expected in the light of previous research and particularly in the light of widely held beliefs about their importance.

In order to do some theoretical and empirical justice to the likely complexity of the pattern of relationships among environmental features and people's actions, perceptions, and feelings in the world, a multi-stage, multivariate model of these relationships was evolved as part of this research. And, in order to view and study community as a multi-

dimensional concept, four different types of community activity and four different types of community sentiment were included in this model with the understanding that a particular site characteristic might have contrasting effects on these various dimensions of community life.

And, indeed, the findings bear out this assumed complexity and the multidimensional nature of community. For example, sometimes a particular environmental feature, such as physical design, shows opposite effects on different types of community activities or sentiments, and sometimes it shows opposite effects on the same activity or sentiment. In my opinion, such complexity, and at first glance, apparent contradictions are to be expected. To expect otherwise is to succumb to the type of simplistic view of environment and behavior that was criticized earlier in this thesis. It is, however, incumbent on the researcher to interpret and discuss the complexity and seeming contradictions in such a way that the findings make logical sense and form some coherent pattern. This chapter is my attempt to do that.

In order to meet that objective, the chapter is organized around the most important findings¹ and several general issues. The first two parts deal with the effects of the two most influential site characteristics, physical design and percent of AFDC families. The effects of tenants' association are discussed in the section on physical design. The third part is a comparison of moderate-income housing developments

¹Tables 7.1 through 7.4, which appear on the following pages, summarize the direct and indirect effects that the site characteristics and intervening variables have on community activities and sentiments. These tables can serve as a guide for reading this chapter, but in the interest of brevity they will not be referred to in the text.

with urban neighborhoods and with public housing projects. In that part the relatively small impact of population homogeneity and turnover rate is discussed. The fourth part is a discussion of how communities are and can be created by agencies, management, and residents of housing developments and how communities change. In that part the effects of cooperative ownership and age of site are reviewed. The fifth part is a brief discussion of the functions of community in light of the results from this study. It also covers the contrasting roles that the two forms of social interaction play in determining residents' sense of community.

Table 7.1

Summary of Community Activities as Predicted by
Site Characteristics and Intervening Variables

| I Site Characteristics | Friend- ship- kinship p | Acquain- tance p | Use of space p | Common problem p |
|--------------------------|----------------------------------|------------------------|----------------------|------------------------|
| No. of apts. per floor | - | -.10 | -.39* | .10 |
| Percent AFDC | .47* | - | - | -.07 |
| Percent with minors | - | .11 | .28 | - |
| Percent aged 20 to 35 | .16 | - | - | - |
| Economic homogeneity | -.30 | - | - | - |
| Racial homogeneity | .10 | - | .13 | .18 |
| Age homogeneity | - | - | -.22 | - |
| Family homogeneity | - | - | - | - |
| Cooperative | .43* | .35* | .21 | .16 |
| Age of site | .11 | .35* | .39* | - |
| II Intervening Variables | | | | |
| Tenants' association | - | .32 | - | .71* |
| Turnover rate | -.24 | -.16 | .24 | -.15 |
| Victimization rate | .08 | - | .15 | .32* |
| R^2 | .29 | .35 | .27 | .65 |

Note: Path coefficients were obtained using the revised model.
Blanks indicate which paths were deleted in the revised model.

*F ratio for this path coefficient is significant at the .05 level.

Table 7.2

Summary of Community Sentiments as Predicted
by Site Characteristics and Intervening Variables

| | Attachment | Responsi- bility | Perceived influence | Sense of cohesion |
|---------------------------------|------------|---------------------|------------------------|----------------------|
| I Site Characteristics | p | p | p | p |
| No. of apts. per floor | -.42* | - | .41* | -.19* |
| Percent AFDC | .02 | -.25 | -.10 | -.24* |
| Percent with minors | -.18* | - | - | -.14 |
| Percent aged 20 to 35 | - | -.13 | - | - |
| Economic homogeneity | - | -.08 | .31 | - |
| Racial homogeneity | - | - | .32* | - |
| Age homogeneity | .12 | .23 | - | .17 |
| Family homogeneity | - | -.14 | - | -.21* |
| Cooperative | - | -.15 | .19 | - |
| Age of site | -.13 | -.16 | .40* | .28* |
| II Intervening Variables | | | | |
| Tenants' association | - | - | .36* | -.19 |
| Turnover rate | - | -.09 | -.30 | - |
| Victimization rate | - | - | .25 | - |
| Friendship-kinship | -.30* | - | .27 | - |
| Acquaintance | .46* | .46* | -.20 | - |
| Use of space | - | .23 | - | - |
| Common problem | .14 | - | - | .89* |
| Maintenance | .20* | - | .31 | .21* |
| Safety | .30* | .25 | .20 | - |
| R^2 | .83 | .54 | .47 | .79 |

Table 7.3

Substantive Indirect Effects of Site Characteristics
on Community Activities and Sentiments

| Source of Indirect Effect | Dependent Variable | |
|--|--|---|
| <u>No. of apts/floor</u> | | |
| via tenants' association | Common problem (.27) | Acquaintance (.12) Perceived influence (.14) |
| via turnover rate | Use of space (.11) | Friendship- kinship (-.11) Perceived influence (-.13) |
| via safety | Sense of Re- sponsibility (-.12) | Attachment (-.14) |
| via tenants' association and common problem | Sense of co- hesion (.24) | |
| <u>Percent AFDC</u> | | |
| via victimization rate | Common problem (.12) | |
| via friendship-kinship | Attachment (-.14) | Perceived influence (.13) |
| via safety | Attachment (-.24) | Sense of responsi- bility (-.20) |
| via maintenance | Perceived influence (-.15) | |
| via victimization rate and common problem | Sense of cohesion (.11) | |
| <u>Percent 20 to 35</u> | | |
| via tenants' association | Common problem (-.16) | |
| via tenants' association and common problem | Sense of cohesion (-.14) | |
| <u>Cooperative</u> | | |
| via acquaintance | Attachment (.16) | Sense of responsi- bility (.16) |
| via friendship-kinship | Attachment (-.13) | Perceived influence (.12) |
| via maintenance | Perceived influence (.12) | |
| <u>Age of site</u> | | |
| via acquaintance | Attachment (.16) | Sense of responsi- bility (.16) |

Table 7.4

Substantive Indirect Effects of Intervening Variables
on Community Activities and Sentiments

| Source of Indirect Effect | Dependent Variable |
|--|---|
| <u>Tenants' association</u> via turnover rate via common problem | Friendship-kinship (.12) Use of space (-.12) Sense of cohesion (.63) |
| <u>Victimization rate</u> via common problem | Sense of cohesion (.28) |
| <u>Friendship-kinship</u> via safety | Attachment (.15) |
| <u>Acquaintance</u> via safety | Attachment (-.11) |

Part One: Physical Design

The single physical design feature included in this study is the size of the smallest grouping of apartments within developments -- the number of apartments grouped around the space closest to residents' private entrances. This variable is called "number of apartments on a floor" or "number of apartments in a group" and in row house sites the variable takes on the value of zero. Physical design, as measured by this variable, proves to be a very important causal antecedent of community activities and sentiments: the number of apartments in a group either directly or indirectly affects all four types of community activity and all four types of community sentiment.

The nature of the direct impact of number of apartments per floor on community activities and sentiments is, as expected, predominantly negative: this physical design feature has a direct negative effect on residents' use of space, attachment, and sense of cohesion but a positive effect on perceived influence over management. Of the total of nine substantive indirect effects on this design feature on activities and sentiments, however, five are positive. So although its direct impact on community activities and feelings is predominantly negative, its indirect impact is divided between positive and negative effects. Moreover, four of the five indirect positive effects of physical design are accounted for by the existence of a tenants' association. Thus, although the direct impact of group size is predominantly negative, its indirect impact via the existence of a tenants' association is positive.

The number of apartments on a floor also has direct negative effects on turnover rate, on perceived safety, and on the perceived quality of

maintenance. One can conclude, then, that this physical design feature, regardless of the social characteristics of residents or the organizational features of these developments, has a predominantly negative influence on many important aspects of community life. The indirect positive effects it does show, via tenants' association and experience in trying to solve a common problem, speak to some of the ways in which residents in these developments are actively trying to cope with the problems they encounter in those sites where many apartments are grouped together. Indeed, the greater likelihood that a tenants' association will be formed in sites where many apartments are grouped together is probably a result of the more severe security and maintenance problems found in such sites.

Most of the effects that number of apartments on a floor has on the level of community activity are indirect; the only direct effect it has on activity is a negative one on use of shared space. In contrast, the number of apartments on a floor has a direct effect on three of the four types of sentiment. This suggests that residents' attitudes or feelings about their community are more likely to be directly affected by this physical design feature than are their activities.

In the sections that follow the major effects of physical design on community activities and sentiments are discussed. And this part of the chapter ends with a discussion of the relationship between physical design and the formation of a tenants' association.

Physical Design and Community Activities

The results of this study show no direct relationship between the number of apartments on a floor and either form of social interaction, and certainly no negative effect. The lower level of acquaintance that Cooper found among residents at Geneva Towers as compared to St. Francis Square (Cooper, 1974), however, suggested that this design feature would have a negative effect on the level of acquaintance among residents. This difference that Cooper found may have been due to a site characteristic other than physical design. Cooperative ownership has a powerful positive influence on the level of acquaintance among residents, as indicated by this study. And this suggests that it may be the cooperative ownership of St. Francis Square that accounts for its higher level of acquaintance compared to that found at Geneva Towers.

That physical design, at least as measured by the number of apartments in a group, has no direct effect on either form of social interaction among residents is a significant result. It suggests that, as far as planned residential environments that house a mixture of moderate- and low-income families are concerned, high-rise buildings per se do not lead to withdrawal or social isolation among residents. Nor do low-rise buildings per se encourage a greater degree of social communion among residents.

Although physical design alone has no effect on either form of social interaction, it does affect both forms indirectly. Thus, when the rate of turnover is taken into account, the number of apartments in a group has a negative effect on the level of friendship-kinship. That

is to say, whatever negative impact physical design has on close ties among residents is not due to the physical design per se but is due to the higher turnover rates associated with large groupings of apartments. Similarly, the number of apartments in a group has a positive effect on the level of acquaintance among residents but only when the existence of a tenants' association is taken into account. That is to say, whatever positive impact physical design has on the informal type of interaction among residents is accounted for by the greater likelihood that a tenants' association has been established in sites where there are many apartments grouped together.

The number of apartments grouped together has this same positive indirect effect, via tenants' association, on residents' experience in trying to solve a common problem. Thus, although the number of apartments on a floor has no direct influence on either acquaintance or residents' experience in trying to solve a common problem, it has an indirect positive influence on both of these types of community activity via tenants' association. When the number of apartments in a group is large, it is more likely that a tenants' association has been formed and that, in turn, has a facilitating effect on acquaintance and on residents' getting together to solve a common problem.

It should be emphasized that when the effect of tenants' association is held constant, the size of the apartment group has no effect on residents' getting together to solve a common problem or on the level of acquaintance. It is only via tenants' association that a relationship between physical design and either of these forms of community activity is discernible. Thus, one can conclude: 1) that in high-rise sites

residents are more likely to get acquainted and to join together to solve a common problem through the formal organization of a tenants' association than are residents in low-rise sites; and 2) that regardless of whether or not a tenants' association exists, residents of both types of sites are equally likely to get together to try to solve a common problem and to become acquainted with each other.

Physical Design and Instrumental Community Sentiments

For the purposes of this discussion a distinction is made between the instrumental and the expressive dimensions of sense of community. The instrumental dimension is captured by sense of cohesion and perceived influence over management and the expressive by attachment.

Sense of cohesion and perceived influence over management are considered reflective of the instrumental dimension of sense of community because the content of the items used to measure these variables refers to the pursuit of a particular goal or the accomplishment of a task. The content of the items used to measure attachment do not refer to the pursuit of tasks or goals but rather concern the degree to which residents like or dislike their development, the degree to which they would be sad or happy to leave, and the image they feel the development has in the minds of non-residents. Based on content, then, these items and the index they form can be considered a measure of the expressive or affective dimension of sense of community.²

² This distinction between "instrumental" and "expressive" dimensions of community is adopted from Suttles (1972).

As discussed below, the number of apartments in a group has both positive and negative effects on the instrumental dimension of community sentiment but it has only negative effects on the expressive dimension.

The number of apartments on a floor was expected to have a direct negative effect on residents' sense of cohesion largely because this design feature was expected to have such an impact on all four types of community sentiment. The results show that the size of the apartment grouping does, indeed, have a direct negative effect on residents' sense of cohesion: the larger the group of apartments, the lower residents' sense of cohesion. At the same time, however, the number of apartments grouped together has a powerful indirect effect on sense of cohesion, via tenants' association and experience in trying to solve a common problem, that is positive. The more apartments there are grouped together, the more likely it is that a tenants' association has been formed and, thereby, that residents have gotten together to solve a problem and, in turn, have a relatively high sense of cohesion. However, it is only via a formal organization and previous experience in trying to solve a problem that high-rise sites have a higher sense of cohesion than do low-rise sites.

In this way, by virtue of a formal organization and the consequent experience in trying to solve common problems, high-rise residents achieve a sense of cohesion that they would not otherwise have, as shown by the direct negative relationship between the design feature and sense of cohesion. The fact that, despite the formation of a formal organization and the consequent experience of solidarity, residents in high-rises have less sense of cohesion than low-rise residents speaks

to the powerful effect that the size of the physical grouping of apartments per se has on feelings of solidarity. High-rise residents have to resort to a formal organization and previous experience to achieve a sense of cohesion that in low-rises is apparently a natural by-product of the smaller grouping of apartments.

A sample of respondents' answers to item G2, which asks about their reasons for thinking that residents would or would not get together to try to improve maintenance services if they deteriorated, reflect a variety of reasons. Some residents emphasize the existence of a tenants' association; others refer to previous experience or to the presence or absence of social cohesion in the development:

Because we have a tenants' organization and that's what they're there for -- to make sure the building stays up to par.

They have a council and people are very active -- on rents and maintenance. They seem to be very interested in the development.

Most of the people in the past have gotten together for this reason.

Because in the past when we've had difficulties and things began to get run down, the tenants had meetings and we had remarkable improvements. We done it many times.

Well I mean people seem kind of congenial around here and people seem to get along pretty good so I think if things got too far out of hand where the place was running down terrible, we would get together to get things fixed up.

Well there are some people here who will get together but most people won't do it. They're not interested in doing anything.

Everyone lives for himself.

It seems to be a well-knit group. The people in the apartments seem to be concerned about them. A close knit group will (get together) when anything is going on strange or peculiar. They tell the other fellow to be on the watch out. Although we don't visit anyone a lot, we do that.

Cause most people do it on their own.

I think if things got bad, people would unite.

I think the community is strong and people would get together to solve problems.

Because our tenants' association is on the ball.

The item on residents' perceived influence over management was adopted from a study by McCarthy and Saegert (1976) that demonstrated that this form of community sentiment in public housing varies inversely with the number of apartments sharing an entry. It was expected, therefore, to vary inversely with the number of apartments on a floor in this study. Instead of the expected negative effect, however, number of apartments on a floor has a powerful positive effect on residents' perceived influence over management: the larger the physical grouping of apartments, the greater the sense of influence.

There are at least two possible types of explanations for this finding. First, the positive relationship between physical design and perceived influence over management may be a consequence of residents in high-rises having to exert more influence over management to resolve various problems. As indicated by the negative relationship between number of apartments per floor and both the perceived quality of maintenance and perceived safety, high-rise residents appear to be more dissatisfied with these conditions than low-rise residents and therefore may have had more experience than low-rise residents in trying to influence management to improve these conditions. Furthermore, since the physical plant of high-rise buildings is more complex than in low-rise buildings, the problems that arise in high-rise buildings are likely to

be more complex and are more likely to require management's intervention in order to be solved. Such problems include broken elevators, broken intercom systems and broken incinerators.

In other words, influence over management may be more of an issue in high-rises because residents depend on management more and because they have more frequently exerted such influence. Whereas in low-rise sites, where residents perceive fewer problems involving maintenance and safety and where the problems are less likely to require management's intervention, influence over management may be less important and less frequently exerted.

The second type of explanation lies in the physical design feature itself rather than in prior experience in trying to influence management. A large number of apartments on a floor where residents share the same space may also give residents a sense of uniformity or even of commonality. Where the number of apartments grouped together is small, particularly in row-house sites where each family has its own entrance, the physical design may encourage a greater sense of individuality among residents. Although greater uniformity of design as measured by this design feature does not have a positive effect on either attachment or sense of cohesion, it does appear to facilitate a sense of power vis-à-vis management. The message to residents of a high-rise may be "we're all in the same boat," and therefore, in relation to management, "there are many of us and few of them." In addition, there may be a certain felt power in numbers regardless of the sense of commonality involved.

Physical Design and Expressive Community Sentiment

While the number of apartments in a group does have some positive effects on the two types of sentiment that are considered instrumental, this design feature has only negative effects on the expressive dimension of sense of community. Indeed, this physical design feature has two negative effects on attachment: one is direct and one indirect via perceived safety. According to these effects, residents are dissatisfied with large groupings of apartments both because of the size of the group itself and because large groupings engender feelings of fear.

Residents may also dislike the large groupings of apartments because they feel crowded in such settings and because they feel they do not have enough privacy (McCarthy and Saegert, 1976; McCarthy, 1978). Although specific items to measure these two sources of dissatisfaction were not included in the present study, a glance at respondents' answers to some open-ended questions in the survey suggest that residents do associate crowding and lack of privacy not only with high-rise buildings but also with walk-up buildings when there are a large number of apartments on each floor. When asked to evaluate different building types (see items A2 and A3 in the questionnaire in Appendix A), respondents commented on problems of crowding, lack of privacy, noise, difficulty in supervising children, poor maintenance, and lack of security in high-rise buildings and in walk-up buildings with many apartments on each floor. For example, one respondent rejected the high-rise because "I don't like high-rises. In a high-rise too many people live in the same building. That means problems with neighbors." Another respondent said of high-rises "I never liked elevator buildings. You constantly come in con-

tact with people. Like you're living in the same house, but in different rooms." With respect to a walk-up with many apartments on each floor this same respondent said "You still have a long hall. Everybody is passing everybody's door and you feel fenced in." Another respondent chose the row house design because "I like it. I like the privacy. I have my own door that I go in and out and no one else uses my door." Another respondent chose a walk-up where six apartments share an entry because "I like this type because when there are too many people you don't get to enjoy it."

Residents often mentioned problems with security and maintenance as another reason for not choosing the high-rise building type as the best place to live. One respondent, who lives in a high-rise, prefers a walk-up, "Management keeps this building up pretty good, but if I lived in a smaller building it would be easier to keep clean." Another resident of a high-rise reports "The elevators are never operating properly and the upkeep of the building is very poor." One respondent feels her high-rise building is unsafe because "The elevator is always going on the blink. It's dangerous. You never know who might be in one of the stairwells. People lurk in there. People get mugged in the elevators too." Of course opinions differ and a resident of the same building gives the following evaluation "We have a guard service. The entrance is safe and well lit. No one is lurking in dark hallways. My apartment has a view of the city and we have good services."

Based on the analysis of the fixed-choice items, residents' feelings of attachment, as well as their feelings of safety and their evaluation of maintenance, are strongly and negatively affected by the number of

apartments grouped together.

Physical Design and the Existence of a Tenants' Association

The intervening variable existence of a tenants' association plays a part in a total of four, positive indirect relationships between the number of apartments grouped together and some type of community activity or sentiment. The greater likelihood that a tenants' association has been established where the number of apartments in a group is large accounts for an indirect positive effect from this design feature to two types of activities (acquaintance and experience in trying to solve a common problem) and to two types of sentiment (sense of cohesion and perceived influence over management).

Each of these indirect relationships is composed of at least: 1) the positive link between the number of apartments in a group and the existence of a tenants' association; and 2) the positive link between the existence of a tenants' association and the level of various activities and sentiments.

One of the questions raised by these findings is why are tenants' associations more likely to be established when a large number of apartments are grouped together. There are several possible answers. First, where there is a large pool of people to draw from, one may be more likely to find a few residents with the skills, energy, or determination to start and to sustain a tenants' association.

The second and, in my opinion, more likely reason is that the problems residents encounter in high-rise buildings or in walk-ups where there are a large number of apartments on each floor are severe enough to pre-

cipitate the formation of a formal organization. There is support for this argument in the findings: the number of apartments grouped together has a direct negative effect on both perceived safety and the perceived quality of maintenance. This indicates that according to residents' perceptions, the problems of security and maintenance are more severe in high-rise than in low-rise buildings.

This particular theoretical model places these perceived problems after tenants' association because the research objective was to see how various community attributes affect these problems, and how these problems, in turn, affect different dimensions of the sense of community. It would be possible, however, in another study to see how and why tenants' associations are formed and to find out whether the perceived severity of crime and maintenance problems does, in fact, account for the greater likelihood of such associations forming in high-rise developments.

The positive relationship between number of apartments in a group and the existence of a tenants' association and the argument presented above that tenants' associations are likely to be formed when residents perceive serious problems in their environment speak to the way in which residents actively cope with their surroundings and the difficulties or problems they encounter in those surroundings (such as lack of safety or poor maintenance). Apparently, residents in these communities do not passively accept such difficulties as given and unavoidable but rather, through the formation of a tenants' association and common efforts, attempt to resolve them. It is likely, however, that when these problems become very severe and residents are unable, even after much effort, to resolve them that the amount of active, involved effort to solve them will decline dramatically, as seemed to be the case at Pruitt Igoe for example.

That the number of apartments in a group has a positive indirect impact on community activities and sentiments while sometimes also having no direct effect (as on acquaintance and common problem) or even a negative one (as on sense of cohesion) makes the picture complicated. Most effects that the environment is likely to have on people's activities and sentiments are, however, probably far more complicated than models such as this one can allow for. The advantages of such a model and the results that its application produces are the opportunities they provide to begin to understand some of the complexity of the relationship between environment and behavior. What we have seen here is that a physical design feature can have one kind of direct relationship to people's feelings and actions and another kind of indirect relationship that is accounted for by the presence of a formal organization.

The existence of a tenants' association accounts for a positive relationship between number of apartments in a group and the two types of sentiment that are considered instrumental, sense of cohesion and perceived influence over management. Thus, particularly with respect to sense of cohesion, residents are likely to achieve a greater sense of instrumental solidarity in sites where there are a large number of apartments grouped together by virtue of the existence of a formal organization in such sites. Such an organization does not, however, lead to a greater sense of expressive solidarity. That is because the existence of a tenants' association has no effect on attachment, either directly or indirectly. Hence, by virtue of a formal organization, residents in sites with a large grouping of apartments are able to increase their sense of instrumental solidarity but not their sense of

expressive solidarity. Nor, in other words, do residents' levels of satisfaction increase by virtue of a tenants' association or by virtue of common efforts to solve a problem. In sum, residents are trying through common efforts to solve problems they encounter in their residential environment, but this does not appear to affect their feelings of attachment or commitment to that environment. Furthermore, if the problems become too grave, common efforts may cease and these problems will definitely have a negative effect on the level of attachment and commitment.

Part Two: Percent of AFDC Families

Three different social characteristics of sites were included in the study's theoretical model: the percent of AFDC families, the percent of families with minors, and the percent of families where the head of household is 20 to 35 years of age. The percent of AFDC families turns out to have, by far, more impact than either of the other two social characteristics. Apparently, it is not the proportion of families with minors or the proportion of young families that affects community activity and sentiment in these environments but rather the proportion of households with minors that are also headed by a single, female parent and receive welfare.

The percent of AFDC families affects, either directly or indirectly, two of the four types of community activity and all four types of community sentiment. The impact that the percent AFDC has on community sentiments is predominantly negative: of the 8 effects it has on sentiments, six are negative and only two are positive. Furthermore, similar to the effects of physical design, the only effects percent AFDC has on community sentiments that are positive are on instrumental feelings; it has only negative effects on the expressive dimension of community sentiment. The two effects that percent AFDC has on community activities are, however, both positive. So, as is true of the other important site characteristic, number of apartments in a group, the influence of percent AFDC on community activities and sentiments is not entirely negative nor can it be described in any simple way.

Also, like physical design, the percent of AFDC families has some

additional negative consequences. It has a direct negative effect on victimization rate, on perceived safety, and on the perceived quality of maintenance. Thus the higher the percent of AFDC families is, the higher the victimization rate, the lower the level of perceived safety, and the poorer the quality of maintenance as evaluated by residents.

Percent AFDC and Community Activities

The one direct effect that the percent AFDC has on community activities is a powerful positive effect on friendship-kinship. This is not surprising since it is likely that single mothers who are not working spend much of their time in or near the development and, as a consequence, are likely to develop close relationships with other residents.

The positive relationship between percent AFDC and friendship-kinship is consistent with some previous findings and inconsistent with others. It is consistent with the urban neighborhoods study of Kasarda and Janowitz (1974) showing that individuals of lower economic status tend to have a larger proportion of friends and relatives living in their own communities. It is also consistent with case studies of low-income working class urban neighborhoods which show that residents have close ties with each other (Gans, 1968; Fried, 1963; Fried and Gleicher, 1961; Suttles, 1968). This positive relationship is inconsistent with studies of public housing projects that imply that a concentration of low-income families in planned residential environments breeds anonymity among residents (Cooper, Day, and Levine, 1972; Rainwater, 1970; Yancy, 1973; Moore, 1969; McCarthy and Saegert, 1976).

This may be true when the population is entirely low-income, as in public housing, but the results of this study demonstrate that when there is a mixture of low- and moderate-income families, the percent of low-income households, as measured by the percent of AFDC families, has a positive not a negative effect on the degree of mutual knowledge and intimacy among residents.

The second effect that percent AFDC has on community activities is also positive: it is an indirect effect, via victimization rate, on experience in trying to solve a common problem. As expected, based on Newman's research (1972, 1973), the percent of AFDC families has a positive effect on victimization rate: the higher the percent AFDC, the higher the victimization rate. Victimization rate, in turn, has a positive effect on experience in getting together to try to solve a common problem since, as shown by a review of a sample of answers to the open-ended question about the nature of the common problem, one of the most frequent problems residents get together to try to solve involves aspects of crime and security. In this way, then, the percent AFDC has a positive indirect effect on this form of community activity.

Again we have evidence that residents are not passively accepting their environment and its conditions, in this case the conditions of crime, but instead are attempting to resolve the problem, to change the condition. This study does not address in detail the process by which residents attempt to do this, or their success and failure, but the relationships suggest the importance of examining this process in future research.

Percent AFDC and Community Sentiments

The percent AFDC has a direct negative effect on residents' sense of responsibility, as expected based on the ideas of Newman (1972, 1973) and Cooper (1972). The higher the percent AFDC, the lower is the level of felt responsibility among residents. Percent AFDC also has a negative indirect effect on responsibility via perceived safety: that is to say, that the higher the percent AFDC, the lower the level of perceived safety, and therefore the lower the level of felt responsibility. In these two ways, then, the sense of responsibility among residents is low when the percent of AFDC families is high in these study sites.

The percent of AFDC families also has a direct negative effect on residents' sense of cohesion. The direct negative relationships between percent AFDC and residents' feelings of responsibility and cohesion are consistent with implications in other writings about the lack of mutual trust and solidarity in public housing (Suttles, 1972; Cooper, Day, and Levine, 1972; Moore, 1969; Rainwater, 1970). It should be emphasized that these relationships are found in this study despite the higher levels of friendship-kinship in sites with a high percent AFDC. This is because the level of friendship-kinship bonds in a site has no effect on either residents' sense of responsibility or their sense of cohesion.

In addition to this negative direct effect on sense of cohesion, percent AFDC has a positive indirect effect via victimization rate and experience in trying to solve a common problem. Thus, while a high percent of AFDC families leads directly to a low sense of cohesion, it also causes a high victimization rate that, in turn, causes residents

to try to solve the crime or security problem and that, in its turn, leads to a higher sense of cohesion. Two conclusions can be drawn: 1) the experience of social cohesion provided by trying to solve a common problem that is crime related does give residents in high AFDC sites some sense of cohesion; 2) this experience does not, however, overcome the inherent low sense of cohesion in sites with a high percent of AFDC families.

Thus, the effects of percent AFDC on sense of cohesion are similar to the effects that the number of apartments in a group has on this instrumental form of community sentiment. Each of these site characteristics has a direct negative effect. Each one also has an indirect positive effect that is accounted for by experience in trying to solve a common problem and by one other variable: tenants' association in the case of physical design and victimization rate in the case of percent AFDC. Again, this suggests that residents are trying to overcome the problems that seem to be generated by a high percent AFDC and a large number of apartments grouped together. In both cases, these problems are likely to involve security and maintenance since both the number of apartments in a group and the percent AFDC families have negative effects on residents' perceptions of safety and of maintenance quality. By virtue of residents' common efforts to try to solve these problems residents in sites with a large number of apartments in a group or a high percent AFDC gain a sense of cohesion they would not otherwise have. This does not mean that problems should be generated purposely in order to create a sense of cohesion among residents. Indeed, the direct negative effects of these site characteristics on sense of

cohesion suggest that even if this were done it could not overcome the low sense of cohesion that seems to be intrinsic to these two site characteristics. What it does mean is that residents in these environments are trying to solve the problems they encounter, which are likely to arise naturally in the course of events, and that structures that can facilitate those efforts, such as a tenants' association, should be encouraged. Also, as suggested earlier, it may be that if community problems become too severe, e.g., if the rate of victimization gets too high, common efforts may cease, and the problem may have a serious negative impact on residents' sense of cohesion. The important feature of the developments studied in this research is that none appears to have reached this point. And yet, it is not known to what degree residents in these sites have been able or unable to solve the problems they have encountered. Nor is it known how discouraged or resigned they may have become.

Like the number of apartments in a group, the percent of AFDC families has positive and negative effects on the instrumental dimension of sense of community. And, again like the physical design feature, this social characteristic has only negative effects on the expressive dimension of community sentiment. However, whatever causal relationship there is between percent AFDC and attachment is accounted for by indirect effects. The powerful indirect effect is via perceived safety: the percent of AFDC families has a negative effect on attachment mostly because it has a negative effect on perceived safety that, in turn, has a positive effect on attachment. In other words, the level of satisfaction and commitment is low in sites with a high proportion of AFDC

families because residents feel unsafe in these communities³ and not simply because there is a high proportion of AFDC families living there.

Thus, although residents in communities with a high percent of AFDC families are trying to resolve the problems they experience, this effort affects only their sense of cohesion. It does not affect their feelings of commitment or satisfaction probably because the problems have not been resolved or, indeed, cannot be resolved to their satisfaction. As noted earlier, the number of apartments grouped together shows the same pattern of effects. Residents are trying to solve some of the problems this site characteristic seems to cause, but this does not affect their level of commitment or satisfaction. Again, perhaps this is because the two problems that are directly associated with both these site characteristics, feelings of fear and poor maintenance, can never be resolved to residents' satisfaction in these communities.

³There is another, smaller negative indirect relationship between percent AFDC and attachment: this is via friendship-kinship. This relationship, however, involves the negative effect of friendship-kinship on attachment, which is discussed in Part Five of this chapter.

Part Three: Physical and Social Context

One of the objectives of this study was to examine the effects of physical design, social characteristics, and organizational features on community activity and on different facets of the sense of community. As it turned out, the two most important site characteristics are a physical design feature and a social characteristic of the population. The effects of each of these attributes were determined while holding the influence of the other one constant and while holding the influence of other variables constant as well. That even within that framework these two site characteristics play such a central role emphasizes the importance of looking at both physical design and social characteristics in studying residential environments and environments generally.

Reference has been made at different points in this study to "communal forms." At least three types of communal forms have been mentioned: federally-subsidized developments that house a mixture of low- and moderate-income families with children, public housing projects that house low-income families with children, and working-class or middle-class urban neighborhoods. Each of these communal forms represents a different physical and social context. What is found to be true in one context is not always true in another. Some of the similarities and differences among these forms highlight the inherent characteristics of each one.

Genuine and Artificial Neighborhoods

One of the most important differences between a housing development and an urban neighborhood is that the former possesses a number of unifying

qualities by definition that the latter do not. The phrase "community by design" refers to this difference, as well as to the extent to which the site characteristics of developments can work to create community in terms of residents' actions and feelings. Some of the qualities that a housing development possesses by definition have traditionally been used to define community. A housing development is a territorial unit delimited by observable boundaries; it possesses a predetermined name and a predetermined image, which is based on the sponsor's objectives in building it and on the racial and economic groups who will be living there. A further unifying quality is that a housing development is centrally managed; when residents are concerned about rent increases, poor security, or poor maintenance, there is a particular person or persons they can go to who are usually located right on the site.

The point is that these qualities of housing developments serve to unify them from the start in ways that are unparalleled in urban neighborhoods. These qualities in Suttles' terms (1972) make housing developments "artificial neighborhoods." It is my opinion that these inherent qualities of housing developments tend to prevent some of the negative consequences one might expect to find in neighborhoods that possess the same attributes -- namely population heterogeneity or high turnover rates. The unity built into these developments, as well as their relative youth and lack of deterioration, may be one reason that neither population homogeneity nor turnover rate has much impact on community activities and sentiments. Some of the effects that each of these attributes did show are discussed below.

the degree of transience has been considered to have such an effect in housing developments and public housing projects (Cooper, Day, and Levine, 1972). Second, because in studies of individuals in urban neighborhoods, length of residence has been shown to have a positive effect on people's activities and sentiments (Hunter, 1974; Kasarda and Janowitz, 1974), and turnover can be considered to measure at the site-level what length of residence measures at the individual-level.

Turnover rate, however, shows very few of the negative consequences that one would expect to find: it has only three significant or substantive effects. In the sites studied turnover rate has a direct negative effect on the level of friendship-kinship bonds. This relationship is consistent with Kasarda and Janowitz's finding (1974) that the length of residence of individuals has a positive effect on the proportion of all friends and relatives living in the local community. That turnover rate does not affect the level of acquaintance is consistent with Hunter's study (1975) that showed that length of residence did not affect informal neighboring.

Turnover rate also has a direct negative effect on residents' perceived influence over management. This is further evidence that community attributes which indicate a high degree of uniformity among residents are likely to encourage a sense of influence vis-a-vis management.

As mentioned earlier, the finding that neither population homogeneity nor turnover rate has very much impact on community activities and sentiments may be a consequence of the fact that these sites possess several unifying characteristics from the start, by definition. The degree to which potential residents are screened by management and the extent to

Population homogeneity, measured by four types of homogeneity, shows very few of the traditionally expected, positive effects on community activities and sentiments. Altogether, population homogeneity in this study has very little impact, either positive or negative.

Economic homogeneity has a direct negative effect on the level of friendship-kinship: economically heterogeneous sites have higher levels of friendship-kinship than do economically homogeneous ones. This is the opposite relationship to the one expected according to writings of Gans (1968), McFall (1974), and Keller (1973). Rather than inhibiting the development of close ties in planned residential environments economic heterogeneity in these sites appears to promote it. Further research is needed to determine why this relationship exists and how it might be changed by altering the degree of homogeneity or heterogeneity present. Nevertheless, the relationship as it stands casts serious doubt on the assumption that economic heterogeneity will discourage the development of close relationships among residents.

Racial homogeneity has only one effect: a positive effect on perceived influence over management. Since the racially homogeneous sites in this study are sites that predominantly house black residents, this relationship suggests that the level of perceived influence is higher in the virtually all black sites than in the integrated sites. Economic homogeneity also has a positive effect on perceived influence over management. These effects seem to suggest, again, that uniformity among residents promotes a sense of power vis-a-vis management.

Turnover rate was expected to be an important negative influence on community activities and sentiments for two reasons. First, because

which management is a central, controlling force in these sites may prevent the kind of conflict that population heterogeneity might have in other circumstances. These qualities may also limit the disorganizing effects that a high turnover rate might have in other circumstances.

Also, that the developments have identities based on their names, their unified appearance, and their image in the surrounding community may also provide a unifying force and a feeling of commonality that may prevent conflict among different groups from arising or at least from becoming a serious problem. These features that make a housing development a community by definition may also serve to integrate the newly arrived household into the development fairly quickly thus preventing high turnover rates from having serious, disorganizing consequences.

And, finally, there is a feeling of pride among residents in many of these developments that may also help to inhibit the degree of conflict or disruption that population heterogeneity or high turnover rates could cause in other communities where such feelings are absent, as in many public housing projects or urban neighborhoods for example. This pride sometimes takes on a tone of determination, determination not to let the community decline or to begin to look like public housing:

We would like to see this place kept up. We pay for maintenance work. I feel that people don't like to live in a messy place -- like the old flats that were here before.

We are trying to keep up our yards. We try to make it look like it isn't Hunter's Point (public housing project).

I feel we have to take care of this complex. Because we wouldn't want it to be another Stella Wright (public housing project).

Among some residents the feelings of involvement in the development and concern about what happens in it or to it are very strong:

I feel I live in the whole development and what happens to one part of the development happens to me as well, in a way of speaking. You live in the complex, you should be proud of it, take pride in it enough to be concerned about things here whether they happen in this area or down farther.

It takes everybody to keep it going together.

I am concerned and if it is a development, everyone should share and get involved with it.

I can maintain a home for me and my kids. The neighbors are good people. They are all trying to make a living and trying to make a home just like I am. We look out for each other's homes.

Moderate-Income Developments and Public Housing Projects

A public housing project is also an artificial neighborhood but usually its physical appearance, its name, and its image have strong negative connotations, and these negative connotations may not lead to the kind of unity or pride that were described above. Part of the reason for this poor image and for the many problems in public housing projects is that they house almost entirely low-income populations in buildings that are often not at all suited to their needs and are not adequately maintained. Moreover, most projects for families with children house a high proportion of AFDC families: the average proportion of AFDC families in San Francisco public housing projects is 45 percent. And, as the results of this study show, in moderate-income housing victimization rate, low sense of responsibility, low attachment, high fear, and poor maintenance are all related to the percent of AFDC families. Thus when the concentration of such families is higher and in entirely low-income communities, the consequences are likely to be far more serious.

Equally important is the likelihood that the higher the concentration of low-income, particularly of AFDC, families is, the greater the residents' vulnerability to physical design features. Several effects of physical design that have been found in public housing but that were not demonstrated in this study support this idea.

Newman's studies of public housing projects (1972, 1973) showed a positive relationship between building height, or number of units per entry, and crime rate. This suggested that there would be a positive relationship between number of apartments on a floor in moderate-income housing and victimization rate. The results, however, indicated no relationship. One possible explanation is that the relationship between design and crime applies to high concentrations of low-income families only. It is not, however, only the higher income of the population but also the resources that that entails. In this study most of the high-rise sites have doormen or security guards and this is likely to reduce the vulnerability of high-rise residents.

Residents' sense of responsibility for shared areas outside the building was also expected to be directly and negatively affected by the number of apartments grouped together since a similar relationship was found in public housing (McCarthy and Saegert, 1976). In the communities studied, however, this design feature shows no direct effect on residents' sense of responsibility, and, on the whole, the sense of responsibility is quite high in all the study sites. Again, it seems likely that physical design, as measured by the number of apartments in a group, has a greater effect on residents' sense of responsibility in public housing, where the population is entirely low-income, than in

moderate-income housing where there is a mixture of income groups.

Both of these variables, victimization rate and sense of responsibility, are unaffected by the number of apartments in a group in moderate-income housing, but do seem to be so affected in public housing. These two variables, however, are strongly affected by the percent of AFDC families in moderate-income developments. It is very possible, then, that in communities where the percent of AFDC families is consistently high, physical design will have more impact than in communities where this social characteristic varies (from 0 to 50 percent with a mean value in the study sites of 12 percent). The higher the concentration of low-income families, the more serious the consequences of poor physical design are likely to be.

Part Four: Community by Design and by Accretion

The particular physical and social form that a housing development will take is a matter of choice or plan and not a matter of chance.

Merton wrote:

A major new pattern of community structure has evolved first in European countries and latterly in our own. This is the 'planned community' in which the number, size, distribution, and organization of the units comprising the residential community are more or less a matter of plan rather than the casual by-product of uncontrolled accretions (p. 183).

This distinction between communities that are formed according to plan and those that develop relatively independently of a plan is a good one. The distinction is, however, a relative one: there are probably elements of a plan and of natural growth and change in all communal forms. In this section the results of this study are discussed in terms of this distinction and in terms of the ways in which the sites studied are communities by design and by accretion.

The results of this study demonstrate that the particular site characteristics that are chosen in planning, designing, and financing a development have a significant impact on the nature of community activities and sentiments once the development is occupied. Thus the agencies and groups who are responsible for designing, building, financing, and managing a development have considerable control over the nature of community life in that setting. In this sense, then, they can to a greater or lesser degree create community. As we have seen, the two site characteristics that are crucial to that process are the number of apartments grouped together and the percent of AFDC families. A large number of apartments grouped together or a high percent of AFDC

families, and particularly the combination of these two features, will hinder the development of a community whereas a small number of apartments grouped together or a low percent AFDC, and particularly the combination, will aid the development of community.

The third site characteristic which substantially affects community activities and sentiments and over which agencies and sponsors have control is whether a development will be cooperatively owned by the residents. After number of apartments per floor and percent AFDC, whether a site is cooperatively owned has more impact on community activities and sentiments than any of the remaining site characteristics. The impact of cooperative ownership is almost entirely positive: of the total of eight significant or substantive effects that the variable cooperative has, seven are positive. All of its effects on activities are direct whereas all of its effects on sentiment are indirect. In this way, however, cooperative ownership affects three forms of community activity and three forms of sentiment. It also has a direct positive effect on the quality of maintenance as evaluated by residents.

As expected, cooperative ownership by residents has positive effects on both forms of social interaction: cooperative sites have higher levels of friendship-kinship and acquaintance than non-cooperative sites. Thus Cooper (1970) is correct in attributing some of the intense social interaction among residents at St. Francis Square to the fact that it is a cooperative. Cooperative ownership also has a positive effect on residents' use of space.

Cooperative ownership has a positive influence on both attachment and sense of responsibility via acquaintance: that is to say, the level

of residents' commitment and satisfaction in cooperatives and their sense of responsibility are higher than in rental developments because the level of acquaintance among residents in cooperatives is higher. Similarly, cooperative ownership has positive effects on perceived influence over management via the perceived quality of maintenance and the level of friendship-kinship bonds. In other words, the level of residents' perceived influence over management is higher when the development is cooperatively owned by residents because: 1) the quality of maintenance, as evaluated by residents, is higher in cooperatives; and 2) the level of friendship-kinship bonds is higher in cooperatives.

That cooperative ownership has no direct impact on community sentiments is an important finding. It is not the fact of cooperative ownership alone or per se that encourages attachment, responsibility, or perceived influence over management but rather the fact that cooperative ownership causes high levels of social interaction among residents and a high quality of maintenance service which, in turn, affect sentiments. This does not, by any means, minimize the importance of cooperative ownership as a site characteristic but rather demonstrates that its effects are not direct from form of ownership to feelings but are mediated by social activities and by the quality of maintenance.

Age of the Site

The three site characteristics that have a substantial impact on community life in federally-assisted, moderate-income developments and over which agencies and sponsors have control are the number of apartments grouped together, the percent of AFDC families, and whether the

site will be cooperatively owned by the residents. Indeed, this last characteristic is also, to some extent, under the control of residents themselves since after a development is occupied it can be turned into a cooperative. These characteristics affect not only community activities and sentiments but also other equally important conditions of life -- victimization rate, perceived safety, and the quality of maintenance.

The fourth important site characteristic is, however, one which no one has control over and that is time. Indeed, age of the site and its effects provide one way of examining the degree to which these sites are communities by accretion or development rather than only by design.

The number of years a site has been occupied affects two types of community activity and all four types of community sentiment. Moreover, all these effects are positive. The findings thus support the expectation that the older a site is in this study, the higher the levels of community activity and sentiment will be. It should be pointed out here that the sites range only from two to twelve years old. It is within this range of fairly young, moderate-income communities, none of which is brand new and none of which is seriously deteriorated, that the positive relationship between age and activities and sentiments is found.

Age of site shows positive direct effects on both forms of social interaction: the older a community is, the higher the levels of acquaintance and friendship-kinship bonds. Because of its effect on acquaintance, age has positive effects on both attachment and sense of responsibility. Thus, residents in older sites have stronger feelings of attachment and responsibility because the level of acquaintance

among them is higher.

And, finally, both the sense of cohesion and residents' perceived influence over management are higher in older communities than in newer ones. And these are direct effects: the two forms of instrumental sentiment are a direct function of how old the community is.

Age of site has no effect on victimization rate, perceived safety, or perceived quality of maintenance. Therefore, in so far as these variables measure the degree of deterioration in a community, the degree of deterioration in these sites is not a function of age. Nor, however, does it appear that older communities have been able to resolve these problems any better than newer communities.

Thus, although older sites can be considered stronger communities because the levels of interaction, mutual knowledge, and sense of community, in all its dimensions, are higher in older communities, this does not appear to help them to resolve problems. This, however, must remain highly speculative at this point since the solution of problems was not included in the study and since sense of community, rather than perceived problems, is the final outcome variable in the model. (This question could be answered by studying these same communities over time. Thus one could see whether the greater sense of cohesion and perceived influence in older sites, as measured in this study, leads to a greater ability in these sites to resolve community problems or, at least, to the lessening of perceived problems.)

Communities Are Created and They Change

The decisions to group a few number of apartments together, to house a relatively low proportion of AFDC families, and to make the

development a cooperative are all planning, design, or management choices that will help create a strong community in federally-assisted, moderate-income developments for families with children. These choices will have a powerful, positive impact on the level of community activity, in all of its dimensions, on the sense of community, in all its dimensions, and on the conditions of everyday life in the community with respect to the objective state of crime, residents' fear of crime, and the quality of maintenance service. To this, fairly considerable degree communities can be and indeed are created.

This study demonstrates, however, that communities like the ones studied are not only created but also grow. Natural growth or accretion is illustrated by the finding that over time the levels of acquaintance and friendship-kinship among residents and their sense of community increase. Such accretion is "natural" in the sense that it is not under anyone's control.

Another form of the growth of community is illustrated by residents' efforts to change the conditions of their environment. (This could be considered accretion or it could be considered creation of community by the residents themselves rather than by outsiders.) In sites where the problems of poor security and poor maintenance are more severe, residents form tenants' associations in an effort to resolve these problems and through that effort gain a sense of cohesion they would not otherwise have. And yet despite these efforts, the effects of certain choices that are made before the development was built that weaken the sense of community -- a large grouping of apartments and a high proportion of AFDC families -- cannot be overcome by residents' efforts. No matter

what the growth or accretion process is, no matter how much residents attempt to overcome the problems caused by these site characteristics, these two characteristics will continue to limit residents' feelings of attachment, responsibility, and cohesion. Moreover, it is likely that if the problems caused by these site characteristics become severe, community will decline in these sites.

Some of the change, that is the growth or decline of community, in these sites can also be attributed to management policies and practices. Management under certain circumstances can and does increase or decrease the proportion of AFDC families living in a development. Developments can also be changed to a cooperative ownership system. The results of this study indicate that such changes would have an important impact on community activities and sentiments. Moreover, management is to a large extent responsible for the quality of maintenance and security in a development, and both of these conditions affect the sense of community and what it is like to live there. Also, the quality of management overall is a highly important ingredient of community that is only touched upon in this study through residents' evaluation of maintenance services. Nonetheless, this one measure has a positive effect on three of the four types of community sentiment. The quality of maintenance is often cited by respondents as a reason for either liking or disliking the development and as a reason for feeling that residents either will or will not get together to improve maintenance services, should they deteriorate. Two residents who gave a low rating of the development as a place to live said: "Because of some of the things that have happened here the manager does not respond quickly

enough to complaints and he favors certain people;" "We have been having a lot of problems. We have changed managers four times. They're really not keeping up the apartments like it was originally planned they would." Reasons for positive evaluations of the development include: "Everytime we call them (the maintenance people) they come right away;" and "Whenever something goes wrong, all I have to do is pick up the phone and call the office and in five minutes they're here." Managements' attitude toward residents is also commented on. "I like the way they treat you. It makes you feel good, very good. The management treats you nice and kind. They have an interest in you. Not one but everyone." Another resident said about the management of her development, "They helped me solve my problems, whereas they could have thrown me out not because I broke any rules but because I had some problems with collateral and not being up to par with my bills."

The discouraging and disorganizing effect that poor management can have is described by one respondent in the following way "The housing organization (tenants' association) was very strong in the beginning. But it received mostly promises and many residents feel that it is not worth the time. For the amount of rent they're paying they might as well move out rather than waste time listening to management problems and not getting any results."

Good management can facilitate the growth of community and sustain high levels of commitment and cohesion among residents. Poor management can hinder the growth of community and, if problems become severe, can be responsible for its decline. These are not, however, immutable processes. Intervention of various kinds can stop the decline of community and, if successful, can indeed rejuvenate them.

The physical design of developments, as measured here, cannot be changed. But decreasing the proportion of AFDC families and changing to cooperative ownership are two good ways in which communities can be strengthened and the conditions of life improved. And, indeed, these two measures are sometimes taken in an effort to turn developments around. The other, less dramatic possibilities are to improve maintenance services and security measures since both the quality of maintenance and the perception of safety have powerful effects on the sense of community. A study of modifications made to row-house public housing projects showed that fairly marginal improvements to the environment, including the addition of street lighting, fencing in of open areas, and brick facing, dramatically increased residents' feelings of safety and also resulted in residents' assumption of more responsibility for maintaining the grounds (Kohn, Franck, and Fox, 1975). (The degree to which residents are involved in planning and evaluating the modifications before they are made has, however, a great deal to do with their success.) A coupling of both strategies, changing the characteristics of the population or changing to cooperative ownership and improving maintenance and security conditions and other management practices, is by far the best approach.

Part Five: Functions of Community

The reason for including four different types of community activity and sentiment in the theoretical model was to ensure that the multidimensional nature of community would be measured. The underlying assumption is that community fulfills various functions and the choice of activities and sentiments included in the model were intended to reflect this variety. For the purposes of this discussion, this variety is described in terms of four functions: community as a safe, well-maintained environment in which to live (perceived safety and quality of maintenance); community as the opportunity for social interaction (acquaintance and friendship-kinship bond); community as a means of achieving cohesion to solve common problems (sense of cohesion); and community as a source of pride and collective identity (attachment). What is interesting and revealing is how the site characteristics make contrasting or complimentary contributions to the fulfillment of these functions and how these functions affect each other.

A Safe, Well-Maintained Environment

Perhaps this is the most basic or minimum function of a residential environment: to provide people with a place to live where they feel safe and where the environment is kept well-repaired and well-groomed. The community attributes that contribute most significantly to fulfilling both of these functions are a small number of apartments grouped together, a low proportion of AFDC families, and a low victimization rate. Cooperative ownership contributes substantially to the quality of maintenance,

and the existence of a tenants' association contributes to residents' feelings of safety.

The fulfillment of this function of community has a strong impact on the extent to which the community serves as a source of pride and collective identity: both perceived safety and quality of maintenance have direct positive effects on attachment. So by meeting these fairly minimal requirements of daily life, a development is also helping to fulfill a more elusive function of community.

Opportunity for Social Interaction

Two forms of social interaction were studied: casual acquaintance and friendship-kinship bonds. Cooperative ownership contributes substantially to the level of both forms of interaction but beyond that the causal antecedents of each differ. The percent AFDC has a powerful positive influence on the level of friendship-kinship and the age of the site has a comparable effect on the level of acquaintance. What is more interesting about these forms of social interaction is the way they differentially affect community sentiments.

As described in Chapter 1, considerable importance has traditionally been attributed to the role of primary ties in determining the extent to which a given geographical area is a community. Indeed, in this author's opinion undue importance has been attributed to friendship-kinship bonds and not enough attention has been paid to the role of casual acquaintance among residents. The results of this study indicate that both forms of social interaction play a role in determining the sense of community in housing developments. However, counter to tra-

ditional expectations, acquaintance plays both a more powerful and a more positive role than friendship-kinship bonds in affecting community sentiments.

The level of acquaintance among residents has a direct significant positive effect on attachment and on the sense of responsibility: the higher the level of acquaintance in a site is, the higher the feelings of commitment and responsibility. Indeed, the level of acquaintance is the most important causal antecedent of both these forms of community sentiment.

That acquaintance has a direct positive effect on sense of responsibility was expected based on the ideas of Newman (1972, 1973) and Cooper (1970); and the relationship does support the idea that in order for residents to feel a sense of responsibility for the use and users of the space outside their apartments, a certain amount of casual acquaintance and mutual recognition is required. That acquaintance should also have a direct positive effect on attachment was also expected given that social bonds are likely to affect the level of residents' commitment to their community. The relationship is consistent with Hunter's (1975) finding that sense of community is positively affected by informal neighboring.

The level of friendship-kinship bonds, however, has a significant direct negative effect on attachment: the higher the level of friendship-kinship bonds, the lower residents feelings of commitment and satisfaction are. This finding is in sharp contrast to previous findings indicating a positive relationship between primary ties and attachment in urban neighborhoods (Hunter, 1974; Kasarda and Janowitz, 1974).

Moreover, the negative relationship in this study seems counter intuitive.

That is because one tends to place an immediate and overwhelming positive value on primary ties and, at first glance, one does not consider the problems such ties can generate in moderate-income housing developments that are no larger than 600 apartment units in size and are usually much smaller. Close relationships between neighbors in a small area where low- and moderate-income families live can involve demands and commitments that generate conflict among residents, such as misunderstandings, disagreements, and fights. This possibility is supported by residents' answers to open-ended questions on their evaluation of the development as a place to live. A random selection of answers produces several responses in which residents seem to recognize the trouble that close relationships with neighbors can generate. Several examples follow. Each of these respondents gave his or her answers as a reason for liking the development.

I never had any problems here. I've always been comfortable here. I like my apartment and my neighbors seem to be nice, but not nosey.

Since I've been here, I like it. I think its nice because nobody bothers anybody. I don't get too familiar with anybody. Nobody bothers me and I don't bother anybody.

I'm not around with other people. They don't know what's going on with me.

I like it here. I'm an indoor person. I know my neighbors but I don't get into problems. I don't bother anyone and no one bothers me.

It is very possible that high levels of friendship-kinship bonds do cause a certain amount of conflict or trouble among residents which, in turn, leads to a low level of attachment. This would then account

for the negative relationship between friendship-kinship bonds and attachment. Casual acquaintance, on the other hand, gives residents a certain amount of social support without involving the demands and involvements that can lead to conflict. One would expect, then, that the amount of trouble between residents would be determined by the level of friendship-kinship bonds but would not be affected by the level of acquaintance and would not enter into the relationship between acquaintance and attachment.

If this is true, then not only has the importance of primary ties in local communities been overemphasized, but the potentially undesirable consequences of these ties have been largely ignored. It seems very likely that in communities similar to the ones studied in this research residents would prefer not to become close friends with their neighbors. What has been so sorely lamented as the loss of primary ties in the local residential environment in urban society may very well be a desirable, if not sought after, state of affairs, at least for low- and moderate-income families in federally-subsidized housing developments. What should not be lost in the discussion, however, are the desirable consequences that acquaintance seems to have. Acquaintance among residents has a strong positive influence on feelings of attachment and responsibility.

The picture, however, is even more complicated. While acquaintance has a positive effect on attachment but friendship-kinship has a negative one, they have the opposite effects on perceived safety. That is to say, acquaintance has a negative effect on perceived safety but friendship-kinship has a positive effect. Close relationships among

residents likely increase the level of perceived safety by giving people a sense of support while acquaintance or casual interaction among residents may decrease the level of perceived safety by increasing people's awareness of crime without giving them the sense of support that close relationships provide.

It seems to be in the nature of close relationships that they provide support to the people involved as well as generating conflict. It is reasonable, then, that the level of friendship-kinship in a community can at the same time lead both to feelings of safety and to conflict that, in turn, causes feelings of dissatisfaction and low commitment. Casual acquaintance, on the other hand, does not seem to give people a sense of support and furthermore may be a vehicle for hearing about crime and thus for generating feelings of fear. At the same time, however, casual acquaintance does not generate conflict and is valued enough in itself to lead to feelings of attachment and responsibility.

Overall, these results cast some doubt on the assumed importance and the assumed positive value of close relationships among neighbors in residential environments like the ones studied. The important social function of community may be the opportunity for social interaction in the sense of providing people with a choice as to whether they wish to pursue casual or intimate relationships with their neighbors. If there is a crime problem or if the particular resident is an AFDC mother, there may, however, be little opportunity for choosing. Given the need for social support in a dangerous environment and given the likely limited mobility of the single parent on welfare, close relationships with other residents may be a matter of necessity, not of choice.

A Source of Pride and a Means of Achieving Cohesion

The two remaining functions to be discussed are community as a source of pride and collective identity, as measured by attachment, and community as a means of achieving cohesion in order to solve a common problem, as measured by sense of cohesion. Earlier in this chapter the former type of sentiment was referred to as "expressive" and the latter as "instrumental." This distinction continues to be important.

As described in Chapter 1, as much importance has traditionally been attributed to the role of attachment as an element of community as to the role of primary ties. As a reaction, the tendency of this author and others (Suttles, 1972) has been to reconsider the importance of attachment to or identification with a community and to emphasize the instrumental aspect of social solidarity in contrast to the more expressive aspect. Suttles writes:

So far I have taken a narrow view of the local urban community by regarding it as the defended neighborhood which segregates people to avoid danger, insult, and the impairment of status claims. This is, I think, a sufficient basis for explaining community differentiation, but it is not all that communities are or become. Part of my emphasis has been a reaction to the overromanticization of the local community and the tendency to make sentiments and sentimentalism so basic to it that the community could later be dismissed as only an expressive solidarity without instrumental functions. But, like all institutions, the local community attracts to itself additional hopes for the expression of self and sentiment. The desire to find a social setting in which one can give rein to an authentic version of oneself and see other people as they really are is not some unanalyzable human need but the most fundamental way in which people are reassured of their own reality as well as that of other people (1972, p. 264).

In Suttles' terms, then, the instrumental dimension is a necessity whereas the expressive is more of a luxury. What this study demonstrates

is that although the two dimensions, as measured by sense of cohesion and attachment respectively, are largely determined by two different types of community activity, the growth or even the existence of both dimensions can be fostered by the same site characteristics. In this way, then, in these developments attachment is not a luxury but an attainable goal in the creation of such communities.

The most important causal antecedent of attachment is level of acquaintance among residents, and the most important antecedent of felt cohesion is experience in trying to solve a common problem. Indeed, the activities that affect attachment, acquaintance and friendship-kinship, do not affect sense of cohesion at all. And the one activity that affects sense of cohesion, experience in trying to solve a common problem, does not affect attachment at all. Moreover, the type of activity that affects each one emphasizes the instrumental or the expressive aspect of each. Indeed, social interaction can be considered an expressive form of activity and experience in trying to solve a common problem an instrumental form.

The differential effects of the existence of a tenants' association further supports the expressive quality of attachment versus the instrumental quality of sense of cohesion. Tenants' association has no effect on attachment whereas it has a positive effect on sense of cohesion, but only via experience in trying to solve a community problem.

Fortunately two of the site characteristics that directly determine the level of attachment also directly determine the sense of cohesion. Both the number of apartments in a group and the percent of AFDC families have direct negative effects on both the instrumental and the expressive

dimensions of the sense of community, regardless of the influence of other site characteristics. Thus, in order to create a community that fulfills both functions, community as a source of pride and community as a means of achieving cohesion, these are the crucial site characteristics to choose: small groupings of apartments and a low percent of AFDC families. It should be recalled that it is these same two characteristics that contribute substantially to creating a safe, well maintained environment. By choosing these two site characteristics and cooperative ownership, the capacity of a housing development to fulfill several different functions of community is greatly strengthened, if not ensured.

CHAPTER 8

RESEARCH AND POLICY IMPLICATIONS

The underlying concepts and particular findings of this study suggest several relationships and several topics that could serve as the basis for further research and for modifications to the theoretical model. The findings also have a number of policy implications for planning, designing, and managing federally-assisted, moderate-income developments for families with children.

Part One: Implications for Further Research

The study revealed several unexpected relationships. Possible explanations for these relationships were presented but these explanations are conjectural and merit further empirical support.

Two unexpected relationships involve perceived influence over management as the dependent variable: Both the number of apartments on a floor and victimization rate have positive effects on perceived influence. Two possible explanations were given for the former relationship. The first is that the more apartments there are on a floor, the more experience residents are likely to have had in trying to influence management and the more important their need to since many of the problems encountered in high-rise buildings require management's assistance to resolve (for example, broken elevators, broken intercoms, people not locking the front door or people allowing strangers to come into the building). The finding that the number of apartments on a floor has a negative effect on

both perceived safety and quality of maintenance provides indirect support for this explanation.

The second explanation is that there is a felt power in numbers so that the more apartments grouped together, the greater residents' sense of power vis-a-vis management. Also, large groupings of apartments may give residents a greater sense of uniformity that may, in turn, increase residents' sense of influence over management. Any one of these explanations requires further research in order to be supported empirically.

The positive relationship between victimization rate and perceived influence over management can be explained along similar lines. Perhaps where the victimization rate is high, residents are likely to have had more experience in trying to influence management to take measures to improve security and in such situations residents are more likely to feel that it is more important that they be able to influence management. A high victimization rate may also give residents a feeling of what they have in common in the sense of "we're all in the same boat."

That the number of apartments on a floor does not affect residents' sense of responsibility except indirectly via perceived safety is also unexpected. This absence of a direct relationship was attributed to the fact that these are moderate-income developments rather than public housing projects and, therefore, house a higher income group. These conjectures suggest that there is an interaction effect on responsibility associated with number of apartments grouped together and income-level of the community. Such an effect could be examined through further research.

Four unexpected relationships involve acquaintance and friendship-kinship bonds, on the one hand, and attachment or perceived safety on the other. While the level of acquaintance in a site has a positive effect on the level of attachment, the level of friendship-kinship bonds has a negative effect. It was suggested earlier in this thesis that this negative relationship may be due to the amount of conflict or "trouble" among residents that close relationships can generate in fairly small communities of the type studied in this research. This idea is suggested by respondents' own comments about not wanting to get "too familiar" with other residents and their frequent references to "not having any trouble with anyone." Acquaintance, however, can give people the chance to interact casually with each other and to depend on each other in emergencies without becoming committed and involved in demands and expectations that can lead to conflict. Whether a high level of friendship-kinship bonds in a site does lead to a high level of conflict and, thereby, to low attachment requires the introduction of an intervening variable, measuring conflict, into the analysis. The expectations would be: that the level of friendship-kinship bonds has a positive effect on the degree of conflict but that the level of acquaintance has no effect; that degree of conflict has a negative effect on the level of attachment; and that degree of conflict accounts for the negative relationship between friendship-kinship bonds and attachment.

The findings also show that while the level of friendship-kinship bonds has a positive effect on perceived safety, the level of acquaintance has a negative effect. It was speculated that close ties with other residents give many people a sense of support, and hence of

security, whereas acquaintance may make them aware, through communication, of the occurrence of crime without providing them with a feeling of support. Whether this is true requires the introduction of intervening variables in the relationships between the two types of social interaction and perceived safety. Such variables would be measures of the degree to which residents feel a sense of support from friends, relatives, or acquaintances and the degree to which they hear about criminal incidents from other residents.

Expanding the Model

One of the purposes of working with a model is, on the basis of data, to simplify a given model. And indeed, the original model for this study was itself simplified as a result of the preliminary analysis. Yet the results in the context of the revised model raise some issues that suggest the inclusion of additional variables in the model, some of which have been described above.

An underlying theme in the study that might be introduced into the model more explicitly as one or more intervening variables concerns groups and their formation. Group size is one explanation for the negative effects that the number of apartments on a floor has on community sentiments. One might well ask, however, whether residents are sensitive to this form of group size and whether this sensitivity affects sentiments. The establishment of a tenants' association is the formation of a formal group. It would be interesting to explore how and why certain site characteristics, such as the number of apartments on a floor, lead to the formation of such a group. The concepts of

group size and type of group (formal or informal) seem to be two ways in which the effects of environment can be meaningfully conceptualized and investigated. The model for this study might be expanded and substantially improved by the incorporation of these concepts.

Four different types of activities and four different types of sentiments are included in the theoretical model but no causal relationships among the activities or among the sentiments are postulated or analyzed. The model might be expanded to postulate and analyze such relationships. The distinction between the instrumental and the expressive dimensions of social cohesion suggests one way this might be done: to examine how instrumental activities and sentiments affect expressive activities and sentiments or vice versa. Since the causal order here is a difficult one to establish, the more appropriate approach might be a longitudinal study of the development of new communities over time to see how the expressive and instrumental dimensions affect each other over time. It would be particularly interesting to see how residents' sentiments about the community upon moving in affect their subsequent pursuit of community activities. One would then be exploring how sentiments affect actions rather than vice versa as was done in this study.

Only one physical design variable is included in the model, the number of apartments grouped together in the space that is closest to residents' apartments. The examination of additional physical design features provides another way of expanding or modifying the model. For example, it would be interesting to see how the number of

apartments on a floor affects community activity and sentiment when the number of units per entry is of comparable size across high-rise or walk-up sites but the number of units per floor differs or vice versa. Also, how do other physical design features, such as the availability of private outdoor space or the grouping of buildings, modify the effects of the number of apartments grouped together?

And, finally, one could study possible interaction effects between physical design features and social characteristics or population homogeneity. The examination of interaction effects would, however, require more study sites than the 43 included in this study. One would expect that the more apartments on a floor, the greater the impact of such characteristics as percent AFDC would have or the higher the percent AFDC, the greater the impact of number of apartments per floor. One might also find that the model applies differently to different building types such that homogeneity might have more effect in one building type than in another or social interaction might have more effect on sentiments where the number of apartments on a floor is relatively large. This kind of research could produce important refinements and modifications to the model.

Trying to Solve Community Problems

The existence of a tenants' association, the level of residents' experience in trying to solve common problems, and residents' perceptions of existing problems were all included as intervening variables in the theoretical model. How and why tenants' associations are formed in certain sites and not in others, the content of the problems residents have tried to solve, their tactics, and their

degree of success in solving them are all additional issues that the research raises.

It seems likely that a pressing problem in a development will precipitate the formation of a tenants' association. A study of public housing projects in New York City indicated that physical modifications to the project which the residents felt were undesirable, and about which they had not been consulted, precipitated the formation of a tenants' organization through which tenants voiced a wide variety of grievances against management (Kohn, Franck, and Fox, 1975).

In that example a change to the environment, viewed as undesirable, caused the formation, at least temporarily, of an organization that sought to bring about desirable changes. Local community organizations in neighborhoods are often established in an attempt to prevent or control undesirable changes such as immigration by other groups, urban renewal projects, or institutional invasion (Hunter, 1974) or to bring about desirable ones such as lessening noise and air pollution from a local airport or stopping "block busting" tactics (Hunter, 1975). Indeed, one of the ways community organization goals have been dimensionalized is whether the group's orientation is to maintenance or to change (Zald, 1967). It is possible in the case of tenants' associations that at different times both goals are pursued--for example to improve maintenance or security services or to prevent a rent increase from taking place. It would be interesting to see what specific events, or other circumstances, lead to the formation of tenants' association and how these events or circumstances vary with site characteristics.

The fact that tenants' associations are more likely to be established in sites where the size of apartment groupings is large but that in spite of this the level of experience in trying to solve common problems does not differ with group size suggests that tenants' associations are more of a necessary vehicle for solving common problems when the size of apartment groups is large. It may be that where the group is small, residents get together in more informal ways to solve problems. It may also be that the type of problem differs with group size and it may be that particular kinds of problems precipitate the formation of a tenants' association. According to residents' perceptions, the problems of security and poor maintenance are more severe in sites with large apartment groupings. It may be that problems of this nature are more likely to precipitate the formation of a tenants' association. This then would account for the relationship between group size and tenants' association. The question then is what problems are residents trying to resolve in sites where the group size is small?

The causal relationship from tenants' association to victimization rate and turnover rate is a somewhat weak link in this study's theoretical model. Further research on when and why tenants' associations are formed and how, over time, such an organization influences and is influenced by community conditions of victimization or turnover would clarify this relationship.

And, finally, there is the issue of residents' success or failure in solving problems. The positive relationship between the existence of a tenants' association and perceived influence over management suggests, indirectly, that a tenants' association may facilitate the

successful resolution of problems but that is speculative at best. It may also be that a tenants' association encourages residents to seek management's help in solving problems. There is a possibility that where there is no tenants' association or where the size of the apartment grouping is small, residents try to resolve problems more independently of management. Indeed, this also is an interesting question: how does the relationship between residents and management differ according to group size or other site characteristics? Is there more resident autonomy and less management paternalism in one setting vs another? In several row-house projects studied by this author, managers complained about residents' unwillingness to comply with management requests and attributed this to the design features of row house units that encourage feelings of independence and autonomy among residents (Kohn, Franck, and Fox, 1975). The positive relationship between group size and perceived influence over management may indicate that where the size of apartment groupings is small, residents feel more independent or autonomous in relation to management: they may feel no need to influence management's decisions.

Levels of Community

The primary objective of this research was to examine the direct and indirect effects of various site characteristics on residents' activities and sentiments with respect to the housing development. Thus the level of community studied was the development but the spatially-defined group considered to be important in affecting the level of those sentiments and activities was the group of apartments arranged around the

space closest to residents' apartments. Thus the design feature applied to the space immediately outside the apartment, but it was the effect that this feature has on residents' activities in and sentiments toward the development, or spaces in the development beyond this first transition space, that was studied. In this sense then the topic was how the physical design of one spatial level of community affects activities and sentiments in a broader, more inclusive level of community. One could, however, study the design features of several spatial levels of community and residents' activities and sentiments with respect to each one as well as the interrelationships among these levels. The conceptualization and analysis required to do justice to such a study would be very complicated tasks. The literature reviewed for this study suggests, however, that the concept of a hierarchy of social and spatial levels of community is worthwhile pursuing.

Suttles (1968, 1972), Hunter (1974), and Newman (1973, 1976) all posit one or another version of the idea of a progressively inclusive hierarchy of socio-spatial units that extends from the individual unit up through some level of the larger, municipal community. The idea of a hierarchy has been used primarily as a theoretical abstraction or a design guideline. Hunter and Suttles use it to interpret findings, Newman to describe how buildings and apartments should be grouped. The hierarchical and inclusive relationships have not been the direct object of empirical investigation.

Suttles (1968) and Hunter (1972) have, however, made strides in documenting the meaningfulness of socio-spatial hierarchies for understanding how, in fact, the local community relates to the larger

society. Subtles found in the Addams neighborhood of Chicago that groups differentiated by sex, age, and ethnicity joined forces under certain circumstances, and moreover did so in a hierarchical fashion depending upon the nature, object, or scope of the threat. At the highest level, all the ethnic groups in the area will join forces, regardless of ethnicity.

Addams area residents...assume that spatial unity automatically leads to social unity and concerted action (1968, p. 34).

The concept of a spatial hierarchy within the development and including the surrounding streets is the fundamental theme of defensible space theory:

Defensible space can be made to operate in an evolving hierarchy, from area to area in a collective human habitat--to extend by degrees from apartment unit to public street....The common corridor shared by a small cluster of apartments on each floor of a multi-story building is the first communal area beyond the apartment unit into which occupants can be made to extend the realm of their homes and the zones of felt responsibility. The second area is the common entry and circulation paths within their buildings. The third area can be created through the clustering of buildings to define a project's grounds and entry. The final level in the hierarchy can be created at the interface where the housing development stakes its claim on the surrounding urban streets and community facilities (1976, p. 5).

Newman is not proposing that the designer merely conceive of the environment as a spatial hierarchy: rather the environment must possess the physical elements that will make this hierarchy visible to residents and outsiders. The visibility of the elements, and hence of the spatial levels they create, will encourage the formation of the matching hierarchy of groups. The most important elements are the grouping of apartments, the grouping of buildings, and the enclosure of indoor and outdoor spaces with real or symbolic barriers. These elements are not meant to create isolated enclaves, but rather to achieve the kind of progressively inclusive

hierarchy of groups that has been described by Suttles and Hunter. At the final level of Newman's hierarchy, the development as a whole must be easily part of the surrounding community.

These ideas raise some interesting research questions. Does a spatially-defined hierarchy of apartment units help to create a matching hierarchy of groups and how does that happen? How does the socio-spatial hierarchy affect the overall cohesion of the development? Do very small groups within the development that are very cohesive within themselves encourage or discourage cohesion at the level of the whole development? And, perhaps most important, what are the site characteristics or other circumstances that work either to facilitate or to hinder the integration of the development into the surrounding community? Do very cohesive developments side by side, as in the area called the Western Addition in San Francisco where many of the study sites in this research are located, make for a strong sense of cohesion at the most inclusive level of the neighborhood? In the Western Addition that does seem to be the case but that may also be a function of the similarity between these developments in physical and social features. In this research the housing development was the most inclusive level of community studied. Its relationships to higher, more inclusive levels in the socio-spatial hierarchy and further exploration of its relationships to lower levels are potential topics for further research.

Part Two: Policy Implications

A number of general implications for planning and designing federally-assisted moderate-income housing developments for families with children can be drawn from the more substantive findings in this study. The implications, given the nature of this study, can only be general ones: specific percentages or specific combinations of site characteristics cannot be suggested on the basis of these findings.

The findings from this study are based on a particular theoretical model of how certain site characteristics of housing developments affect certain community activities and sentiments. As described in Chapter 2, different assumptions about the causal order of variables or the inclusion of additional variables could produce different research findings. Thus, we can never demonstrate empirically that a particular model is the correct one. What we can do is continue to expand or modify certain models on the basis of further research. It should be understood then that the policy implications drawn from this study, as from any set of findings, are also based on the particular theoretical model employed. As we continue to do research and thereby to modify this or any other model, the implications for policy decisions may change. This does not mean that we should not draw policy implications from research findings. It does mean, however, that we need to recognize that the policy implications we do draw are dependent on the particular theoretical model employed and that the implications may change as a result of future research.

The implications presented here are based on the significant or the substantive direct and indirect effects that various site charac-

teristics have either on residents' attachment or their sense of cohesion. The decision to base recommendations on the findings for attachment and sense of cohesion was made for two reasons. First, these two sentiments are the clearest measures of two important dimensions of felt solidarity -- the expressive and the instrumental. Second, the variables included in the study's theoretical model explain a relatively high percent of the variance of these two sentiments.

The purpose in listing these policy implications is to suggest the kinds of decisions and tradeoffs that can be made in designing and planning federally-assisted moderate-income housing developments which will likely facilitate these two forms of social cohesion among residents and that will meet peoples' needs for safe, well-maintained places to live. That these two forms of felt cohesion are valid planning goals is assumed. That a lack of such felt cohesion can have serious effects on the viability and longevity of a development is likewise assumed but is nevertheless an important topic for further research. It is likewise assumed that developments built should provide residents not only with safe places to live but with places where they feel safe and where the day to day maintenance of the environment is good.

Since, under federal housing programs communities by design are being built, there is an opportunity to ensure that they facilitate rather than discourage feelings of social cohesion. The advantage of felt instrumental cohesion is that when necessary, when a crisis does arise, residents will be more likely to work together to try to resolve it. The advantage of expressive cohesion lies in the indication it gives that people are living in an environment that they are committed to and

in which they have the opportunity for communion with others. Housing developments can, to a lesser or greater degree, give people a sense of belonging and the opportunity to be involved with concerns and with people beyond their immediate families.

Federally-assisted, moderate-income housing developments are a type of "local community." And as such, the more cohesive they are, the more likely they are to fulfill some of the functions described by Suttles:

The local community can share some of the burden of making available to people the opportunity for communion...It also has the potential to serve as a consolidated, all purpose, administrative unit, which could go far toward rejoining power and responsibility between the various levels of government and their constituencies. As a localized group of people whose placement in a natural or local system of stratification warrants mutual trustworthiness, the local community can also give people a sense of security and ease (Suttles, 1972, p. 268).

Physical Design

The single physical design feature to which this study has addressed itself is the size of the smallest grouping of the apartments within developments. There is no question that the more apartments there are in such a group, the less social expressive and instrumental cohesion there will be in the development when other influences, such as the existence of a tenants' association, are held constant. The general recommendation is, therefore, that the smaller the number of apartments so grouped, the better; if a high-rise is unavoidable, the number of apartments on a floor should be kept small. The findings also suggest that a large number

of apartments grouped together has ill effects on turnover rate and the quality of maintenance.

Tradeoffs and compensatory measures can also be suggested. Since perceived safety is one of the ways in which number of apartments in a group affects attachment and since quality of maintenance affects both attachment and sense of cohesion, the ill effects of a large number of apartments in a group can be counteracted to some extent by ensuring a high quality of maintenance service and good security measures. If a large number of apartments in a group cannot be avoided, the effects of other site characteristics should be carefully considered and certain ones avoided in order not to increase the probability of low cohesion. The percent of AFDC families and the proportion of families with minors should both be kept low. A mixture of families with and without minors where either one group or the other predominates can, however, have a positive effect on cohesion. Also, making the site a cooperative can have beneficial effects.

And, finally, where the size of the apartment group is large, the formation and active life of a tenants' association should be seriously encouraged by management and by the sponsoring board. It is not enough that the tenants' association exist, it must also work as a forum for residents to solve community problems for it is in that way that it can encourage instrumental social cohesion and counteract the negative impact of a large number of apartments grouped together.

Social Characteristics and Homogeneity

The social characteristic that has serious negative impact on both expressive and instrumental cohesion is the percent of AFDC families. It also has a positive effect on victimization rate and negative effects on perceived safety and quality of maintenance. Even though a high percent of AFDC families does not breed the distrust or withdrawal that has been found in some public housing projects where the entire population is low-income, these negative effects suggest that a high proportion of such families (more than 15 or 20 percent) even in moderate-income developments cannot be recommended.

Compensatory measures are clearly available, and are the same as the ones appropriate for adopting when a large number of apartments are to be grouped together. The combination of a high percent AFDC families and a large number of apartments on a floor should definitely be avoided at all costs since each of these characteristics has powerful negative effects. Indeed, the smaller the grouping of apartments is, the greater is the number of AFDC families that can be accommodated without jeopardizing feelings of cohesion. A high percent of families with minors should also not be combined with a high percent of AFDC families. Ensuring a high quality of maintenance and security measures can do much to encourage a high level of expressive cohesion in sites with a high percent of AFDC families. And, finally, the existence and success of a tenants' association also should be encouraged.

It is this writer's impression from studying these developments that where the buildings are of walk-up or row house type, and are well-maintained and safe, the percent of AFDC families that can be accommo-

dated in moderate-income developments can go as high as 20 percent while still facilitating strong feelings of cohesion. The essential point is to consider the combination of features. Thus the recommendation is not that no AFDC families be housed in these sites. Quite the opposite, the results suggest that living in such communities can have many benefits for these families. These benefits can, however, be best realized when the proportion is low and when it is particularly low in high-rise buildings.

The proportion of families with minors has a negative effect on attachment but no effect on sense of cohesion. The proportion of such families should, therefore, be kept low when other negative effects are unavoidable but in and of itself it does not appear to raise serious problems for expressive or instrumental cohesion. Similarly, the percent of household heads aged 20 to 35 has only a negative indirect effect on sense of cohesion via tenants' association and common problem. Therefore, in comparison to percent AFDC or number of apartments on a floor, it does not raise serious problems.

None of the four types of population homogeneity shows a significant or a substantive effect on instrumental or social cohesion, with one exception. Family homogeneity has a negative effect on instrumental cohesion and therefore a mixture of families with and without minors where either one or the other group is clearly in the majority is recommended. One cannot conclude, however, that other forms of homogeneity or heterogeneity can be safely ignored. What can be said is that in this study neither economic nor racial heterogeneity has the traditionally expected negative effects and, therefore, should not be automatically

excluded as possibilities. Indeed, moderate-income, federally-assisted housing developments provide a good way of achieving a higher degree of racial and economic heterogeneity in residential environments than currently exists in American cities. Such heterogeneity, however, is likely to work and to have beneficial consequences when other site characteristics that discourage expressive or instrumental solidarity are avoided, particularly large groupings of apartments and a high percent of AFDC families.

Cooperative and Age of Site

Cooperative ownership has a positive effect on expressive cohesion. But it appears to have no effect on instrumental cohesion. On the whole, cooperative ownership does not have as much of an impact as might be expected. Nonetheless, it should not be dismissed as an unimportant site characteristic but rather as one site characteristic that, based on this study, does not merit strong recommendations.

The number of years a site has been occupied does have positive effects on sense of cohesion and on attachment. The conclusion can, therefore, be made that both expressive and instrumental cohesion increase with time and what, at first, may be a fragmented community may change into a more cohesive one over time. Nonetheless, during the early stages measures can be taken to increase that possibility -- namely maintaining good maintenance and security services.

Summary

The two site characteristics that have the most impact on expressive and instrumental cohesion in this study are the number of apartments grouped together and the percent of AFDC families.¹ Of the site characteristics examined, these two have the least ambiguous policy implications. When possible, the number of apartments grouped together and the percent of AFDC families should be kept small. A large number of apartments in a group should never be combined with a high percent of AFDC families. And if either site characteristic is selected, (a large number of apartments in a group or a high percent AFDC) the possibility of cooperative ownership should be considered and the establishment of a tenants' association and its importance seriously considered. More importantly, a high quality of maintenance services and security measures should be maintained. The latter recommendation applies to all sites since the quality of such services is important in sustaining a strong sense of community.

¹These two site characteristics also have strong effects on conditions that may be of more immediate concern than social cohesion to planners, policy-makers, or management, namely turnover and victimization rates. Number of apartments on a floor has a positive effect on turnover rate as does percent AFDC on victimization rate.

APPENDIX A
QUESTIONNAIRE ADMINISTERED TO RESIDENTS

I.D. # _____

Building Type (TRANSFER FROM ASSIGNMENT SHEET OR DETERMINE.)

| | |
|--------------------------------------|---|
| <i>Elevator or High Rise</i> | 1 |
| <i>Walk up, Long Indoor Corridor</i> | 2 |
| <i>Walk up, Galleria</i> | 3 |
| <i>Walk up, Divided</i> | 4 |
| <i>Row House</i> | 5 |
| <i>Row House - Garden Apartment</i> | 6 |

(INTRODUCTION) My name is _____.
We are doing this survey for an architect who wants to design housing that fits the needs of the people who will live in it. To do that, he needs to know how people feel about their housing after they have lived there awhile.

How long have you lived in this apartment? _____
(IF NOT CLEARLY ONE YEAR OR LONGER, ASK "What month and year did you move to this apartment?" Month _____ Year _____.
IF NOT ONE YEAR OR LONGER, THANK R FOR HIS/HER TIME AND LEAVE.)

We would like to hear your opinions and feelings about what it's like to live in this development. There are no right or wrong answers. We will keep all your answers private. Your name will never be used.

Interviewer# _____

- A. 1. To start, we're going to look at a picture of some different types of buildings. In this survey we are interviewing people in many different kinds of buildings across the country, but we want to match each building with one of these six types. And we want to find out how people feel about these different types.

This is an elevator building. (IN PICTURE I, POINT TO EACH BUILDING AND ITS FEATURES AS YOU DESCRIBE THEM.)

This is a walk up building with a long, indoor corridor. To get to an apartment in this building you can go in either one entrance or the other. This is another type of walk up, called a galleria -- the stairways and corridors are outdoors.

This third type of walk up is divided into smaller buildings so that a small number of families share each entrance. If you want to go to an apartment here, in this building (POINT TO FIRST SMALL BUILDING IN DIVIDED WALK UP), you have to go in this entrance (POINT TO ENTRANCE). The stairway in this type can be either indoors or outdoors.

And this is row housing. Each family has their own private entrance right on the grounds, and there are no apartments above or below other apartments. This last picture shows garden apartments where each family has their own private entrance but one apartment is located on top of another one. Sometimes the family on top has a private stairway to the ground.

Think of the building you're living in now. In your opinion which of these types does it most closely match?

(CIRCLE R's ANSWER. IF R IS MISTAKEN, WRITE "M" IN MARGIN AND SAY "It seems to me that the type that is closest to your building is ... because the way I got to your apartment was by ..." AND ADD ANY FURTHER DESCRIPTION THAT HELPS EXPLAIN R's BUILDING TYPE.)

| | |
|-------------------------------|---|
| Elevator | 1 |
| Walk up, long indoor corridor | 2 |
| Galleria | 3 |
| Walk up, divided | 4 |
| Row housing | 5 |
| Garden apartments | 6 |

- A 2. Think of the building type you're living in now compared to the other five types. How would you rate the type you're living in now -- is it a good type of building for you, a bad type of building for you or just okay?

| Good type | Just okay | Bad type | D.K. |
|-----------|-----------|----------|------|
| 1 | 2 | 3 | 94 |

- A 3. Why do you feel that way?
(PROBE ABOUT BUILDING TYPE, IF NECESSARY)

A 4. For many questions in this interview I will be asking you to choose an answer from a card. (HAND BOOK OF CARDS TO R.) Please turn to the first card.

Think of all six building types. How good or bad is the type of building you're living in now as a place to raise children?

Please read all the answers on the card and choose the one that best describes how you feel.

(CARD 1)

| | | | | | |
|-------------|-----|---------------|------|--------------|------|
| Very bad | Bad | In between | Good | Very good | D.K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

A 5. (REFER TO PICTURE I) Which type of building do you think is the best place to raise children?

| | |
|-------------------------------|---|
| Elevator | 1 |
| Walk up, long indoor corridor | 2 |
| Galleria | 3 |
| Walk up, divided | 4 |
| Row housing | 5 |
| Garden apartments | 6 |

A 6. Why do you think so?

- A 7. Let's look at just the three types of walk ups -- (POINT TO EACH WALK UP) -- the walk up with the long indoor corridor, the walk up divided into smaller buildings, and the galleria with the outdoor corridor. In your opinion, which of these three types is the best type of building for raising children? (CIRCLE "1")

Which is the second best?
(CIRCLE "2")

| | | | |
|-------------------------------|---|---|---|
| Walk up, long indoor corridor | 1 | 2 | 3 |
| Walk up, divided | 1 | 2 | 3 |
| Galleria | 1 | 2 | 3 |

- A 8. Could you tell me why you think those two are the best and the second best for raising children?

- A. 9. This is a picture of a housing development. (SHOW PICTURE II) The buildings are all divided walk ups. The entrance to building A faces on to the public street, which is a residential street without too much traffic. (POINT TO EACH BUILDING AND ITS ENTRANCE.) The entrance to building B is off a path which runs from the public street along the building. The entrance to building C is in the interior of the development.

Which building would you prefer to live in?

| | |
|----------------------------|---|
| Building A (public street) | 1 |
| Building B (path) | 2 |
| Building C (interior) | 3 |

- A 10. Why would you prefer to live there?

- A 11. Imagine that you're coming home alone at night. Which building do you think would be the safest one to come home to?

| | |
|----------------------------|---|
| Building A (public street) | 1 |
| Building B (path) | 2 |
| Building C (interior) | 3 |

- A 12. Why would that one be the safest?

- A 13. Please turn to card 2. Suppose it wasn't possible for you to live here anymore and you had to move out of (NAME OF DEVELOPMENT), how sad or happy would you be to leave?

(CARD 2)

| | | | | | |
|---------------|-------|---------------|-----|-------------|------|
| Very happy | Happy | In between | Sad | Very sad | D.K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

- A 14. Some people who live in housing developments feel that they are part of the whole development. Other people feel they are part of one area in the development. And still others feel that they are not part of the development at all.

Please turn to card 3. How much of (NAME OF DEVELOPMENT) do you feel you are part of?

Please read the whole list before you choose one answer.
(ACCEPT ONLY ONE ANSWER)

(CARD 3)

| | |
|---|----|
| None of it | 1 |
| This apartment (INCLUDING YARD OR PATIO) | 2 |
| This floor (OR PART OF IT) | 3 |
| This building | 4 |
| This building plus one other building | 5 |
| This building plus a few other buildings | 6 |
| The whole development | 7 |
| Other (SPECIFY) _____ | 92 |
| _____ | |
| _____ | |

- A 15. Why do you feel that way?

Now let's talk about living at (NAME OF DEVELOPMENT).

- B 1. Please turn to card 4. On the whole, how good or bad is (NAME OF DEVELOPMENT) as a place to live?

(CARD 4)

| Very bad | Bad | In between | Good | Very good | D.K. |
|----------|-----|------------|------|-----------|------|
| 1 | 2 | 3 | 4 | 5 | 94 |

- B 2. Why do you feel that way?

- B 3. What do most people from around (NAME OF CITY) who have heard of (NAME OF DEVELOPMENT) think about it? How good or bad a place to live do they think it is?

(CARD 4)

| Very bad | Bad | In between | Good | Very good | D.K. |
|----------|-----|------------|------|-----------|------|
| 1 | 2 | 3 | 4 | 5 | 94 |

B 4. Please turn to card 5. How safe or unsafe is (NAME OF DEVELOPMENT) as a place to live? By safe I mean safe from crime.

(CARD 5)

| | | | | | |
|----------------------|--------------------|----------------------|--------|----------------|------|
| Safe (not unsafe) | Slightly unsafe | Moderately unsafe | Unsafe | Very unsafe | D.K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

B 5. Please turn to card 6. How much trouble would you say there is between residents who live in different apartments in this building?

(CARD 6)

| | | | | |
|----------------------|---------------------|-----------------|---------------------|------|
| No trouble at all | A little trouble | Some trouble | A lot of trouble | D.K. |
| 1 | 2 | 3 | 4 | 94 |

↓
IF NO TROUBLE,
SKIP TO B 8

↓
IF D.K.,
SKIP TO B 8

B 6. Please turn to card 7. Here are some of the kinds of trouble that can occur. In your opinion, which of these kinds of trouble occurs most frequently in this building?
 (CIRCLE "1" FOR THE MOST FREQUENT)

Which kind occurs second most frequently?
 (CIRCLE "2")

(CARD 7)

| | | | |
|--|---|----|---|
| Disagreements or fights between adults and teenagers | 1 | 2 | 3 |
| Disagreements or fights among teenagers | 1 | 2 | 3 |
| Disagreements or fights among adults | 1 | 2 | 3 |
| D. K. | | 94 | |
| Other (SPECIFY) _____ | | 92 | |
| _____ | | | |

B 7. Think of the kind of trouble which you think occurs most frequently. In your opinion, what is the thing that these people usually fight or disagree about?

- B 8. Please turn to card 8 . In some buildings there is a problem with parents not controlling their children. In your opinion how much of a problem is that in this building?

(CARD 8)

| | | | | | |
|-------------------------|--------------------|-----------------------|------------------|--------------------------|-------|
| No problem at all | A small problem | A moderate problem | A big problem | A very big problem | D. K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

↓

| |
|------------------------------|
| IF NO PROBLEM SKIP TO C 1 |
|------------------------------|

| |
|-------------------------|
| IF D. K. SKIP TO C 1 |
|-------------------------|

- B 9. Since you've lived here, has this become more of a problem, has it become less of a problem, or has it stayed about the same?

| | | | |
|----------------------|----------------------|--------------------|-------|
| More of a problem | Less of a problem | Stayed the same | D. K. |
| 3 | 1 | 2 | 94 |

C 1. What month and year did you move to (NAME OF DEVELOPMENT)?

| |
|---|
| _____ 19 _____ |
| <div style="display: flex; justify-content: space-around;"> Month Year </div> |

C 2. Overall, since you've been here, do you think (NAME OF DEVELOPMENT) has gotten to be a better place to live, a worse place to live, or has it stayed about the same?

| | | | |
|-------|----------------|--------|------|
| Worse | About the same | Better | D.K. |
| 1 | 2 | 3 | 94 |

C 3. I would like to ask a few questions about the people who have moved into (NAME OF DEVELOPMENT) since you've been here.

In your opinion, are the people who have moved into (NAME OF DEVELOPMENT) since you've been here more responsible than the people who have lived here for a while, less responsible, or are they about the same?

| | | | |
|------------------|------------------|----------------|------|
| More responsible | Less responsible | About the same | D.K. |
| 3 | 1 | 2 | 94 |

C 4. Would you say that the people who have moved in since you've been here tend to get into more fights and disagreements with other residents, fewer fights and disagreements, or about the same number as the people who have lived here for a while?

| | | | |
|-------------------------------|--------------------------------|-------------|------|
| More fights and disagreements | Fewer fights and disagreements | Same number | D.K. |
| 3 | 1 | 2 | 94 |

- C 5. Please turn to card 9 . Right now, if you could have your way about it, how likely is it that you would move out of this development?

(CARD 9)

| | | | | | |
|------------------|----------------------|-----------------|--------------------|----------------|------|
| Very unlikely | Somewhat unlikely | 50-50 chance | Somewhat likely | Very likely | D.K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

- C 6. Why is that?

Now let's talk about things you might do with people who live in this development.

- F 1. Please turn to card 10 . In general, how often do you have casual conversations with other residents here at (NAME OF DEVELOPMENT)?

(CARD 10)

| | |
|-----------------------------------|---|
| Several times a day | 7 |
| About once a day | 6 |
| Every other day | 5 |
| About once a week | 4 |
| 2 to 3 times a month | 3 |
| About once a month | 2 |
| Less frequently than once a month | 1 |

- F 2. Please turn to card 11. How many families do you feel there are at (NAME OF DEVELOPMENT) whom you could count on in an emergency?

(CARD 11)

| None | Just a few | Some | Many | Very many | D. K. |
|------|------------|------|------|-----------|-------|
| 1 | 2 | 3 | 4 | 5 | 94 |

- F 3. How many families are there at (NAME OF DEVELOPMENT) where you know at least one adult resident by name?

| |
|--------------------------|
| Number of families _____ |
|--------------------------|

(IF ROW HOUSE SKIP TO F 5)

(IF WALK UP OR HIGH RISE ASK F 4 AND THEN SKIP TO F 6.)

- F 4. (WALK UP AND HIGH RISE ONLY) Turn to card 12 . Where do most of the families you know by name live? (ACCEPT ONLY ONE ANSWER.)

(CARD 12)

| | |
|---|---|
| Mostly on this floor | 1 |
| Mostly within this building | 2 |
| Mostly within this building and other buildings nearby | 3 |
| All over the development | 4 |

- F 5. (ROW HOUSE ONLY) Please turn to card 13 . Where do most of the families you know by name live? (ACCEPT ONLY ONE ANSWER)

(CARD 13)

| | |
|---|---|
| Mostly within this building | 2 |
| Mostly in this building and other buildings nearby | 3 |
| All over the development | 4 |

- F 6. Please turn to card 14. In general, how easy or difficult is it to recognize a stranger in this building?

(CARD 14)

| Very difficult | Difficult | In between | Easy | Very easy | D. K. |
|-------------------|-----------|---------------|------|--------------|-------|
| 1 | 2 | 3 | 4 | 5 | 94 |

- F 7. Do you have any close adult friends or close adult relatives who live here at (NAME OF DEVELOPMENT)? By close I mean people you feel close to.

| | |
|-----|----|
| Yes | No |
| 1 | 2 |

IF NO SKIP TO G 1

- F 8. Please turn to card 15. How often do you get together with close adult friends and close adult relatives who live at (NAME OF DEVELOPMENT) for instance, to visit or to go out together?

(CARD 15)

| | |
|-----------------------|---|
| More than once a week | 6 |
| About once a week | 5 |
| A few times a month | 4 |
| About once a month | 3 |
| A few times a year | 2 |
| About once a year | 1 |

- F 9. How many close adult friends and close adult relatives do you have who live here at (NAME OF DEVELOPMENT)?

Number _____

G 1. Turn to card 16. Suppose that it took management longer and longer to fix things and (NAME OF DEVELOPMENT) began to get very run down. How likely is it that residents would get together and try to get management to improve the maintenance services?

(CARD 16)

| | | | | | |
|---------------|-------------------|--------------|-----------------|-------------|-------|
| Very unlikely | Somewhat unlikely | 50-50 chance | Somewhat likely | Very likely | D. K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

G 2. Why do you feel that way?

G 3. Since you've been here, have residents ever gotten together to solve a problem in the development?

| | |
|-----|----|
| Yes | No |
| 1 | 2 |

↓
IF NO, SKIP TO G 7

G 4. What was the problem the last time this happened?

G 5. What did residents do about it?

G 6. Did you participate?

| | |
|-----|----|
| Yes | No |
| 1 | 2 |

G 7. Suppose that because of budget cuts the fire station in this area was going to be closed down. How likely is it that the residents in this development would try to do something to keep the fire station open?

(CARD 16)

| Very unlikely | Somewhat unlikely | 50-50 chance | Somewhat likely | Very likely | D. K. |
|---------------|-------------------|--------------|-----------------|-------------|-------|
| 1 | 2 | 3 | 4 | 5 | 94 |

G 8. Why do you feel that way?

G 9. In general, what kind of development would you say this is -- one where people mostly get together to solve problems that affect everyone or one where people mostly go their own ways?

| People get together | People go their own ways | Some of both | D.K. |
|---------------------|--------------------------|--------------|------|
| 1 | 3 | 2 | 94 |

G 10. Is there a tenant association or tenant board in this development?

| | | |
|-----|----|-------|
| Yes | No | D. K. |
| 1 | 2 | 94 |

↓ ↓

| |
|-------------------------------|
| IF NO OR D.K., SKIP TO H 1 |
|-------------------------------|

G 11. Please turn to card 17. How often do you go to tenant association or tenant board meetings?
(IF R REPLIES "WHENEVER THEY HOLD MEETINGS," ASK "How often is that?")

(CARD 17)

| | |
|---------------------|----|
| About once a week | 7 |
| A few times a month | 6 |
| About once a month | 5 |
| A few times a year | 4 |
| About once a year | 3 |
| Every other year | 2 |
| Never | 1 |
| Other (SPECIFY) | 92 |
| _____ | |
| _____ | |
| _____ | |

Now I would like to ask you some questions about how (NAME OF DEVELOPMENT) is managed.

- H 1. Could you turn to card 18. During the first few months after you moved in, how careful was management about whom they allowed to live in this development?

(CARD 18)

| Not at all careful | A little careful | Moderately careful | Careful | Very careful | D. K. |
|-----------------------|---------------------|-----------------------|---------|-----------------|-------|
| 1 | 2 | 3 | 4 | 5 | 94 |

- H 2. How careful do you think management is now about whom they allow to live here?

(CARD 18)

| Not at all careful | A little careful | Moderately careful | Careful | Very careful | D. K. |
|-----------------------|---------------------|-----------------------|---------|-----------------|-------|
| 1 | 2 | 3 | 4 | 5 | 94 |

- H 3. Please turn to card 19 . . How strict do you think management is about collecting rent on time?

(CARD 19)

| Not at all strict | A little strict | Moderately strict | Strict | Very strict | D. K. |
|----------------------|--------------------|----------------------|--------|----------------|-------|
| 1 | 2 | 3 | 4 | 5 | 94 |

- H 4. Now turn to card 20. How good or bad is the maintenance here at (NAME OF DEVELOPMENT)?

(CARD 20)

| | | | | | |
|----------|-----|------------|------|-----------|-------|
| Very bad | Bad | In between | Good | Very good | D. K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

- H 5. Since you've lived here, has maintenance gotten better, gotten worse, or has it stayed about the same?

| | | | |
|--------------|-----------------|---------------|-------|
| Gotten worse | Stayed the same | Gotten better | D. K. |
| 1 | 2 | 3 | 94 |

- H 6. Please turn to card 21. Some people feel that there is not much residents can do to influence what management does. How much do you agree or disagree with that idea?

(CARD 21)

| | | | | | |
|----------------|-------|------------|----------|-------------------|-------|
| Strongly agree | Agree | In between | Disagree | Strongly disagree | D. K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

These next questions are about the area just outside of (NAME OF DEVELOPMENT).

- I 1. Please turn to card 22. How safe or unsafe would you say the area just outside the development is? By safe I mean safe from crime.

(CARD 22)

| Safe (not unsafe) | Slightly unsafe | Moderately unsafe | Unsafe | Very unsafe | D. K. |
|----------------------|--------------------|----------------------|--------|----------------|-------|
| 1 | 2 | 3 | 4 | 5 | 94 |

- I 2. Please turn to card 23. Suppose that because of budget cuts the fire station in this area was going to be closed down. How likely is it that residents from (NAME OF DEVELOPMENT) would get together with people who live just outside (NAME OF DEVELOPMENT) to do something to keep the fire station open?

(CARD 23)

| Very unlikely | Somewhat unlikely | 50-50 chance | Somewhat likely | Very likely | D. K. |
|------------------|----------------------|-----------------|--------------------|----------------|-------|
| 1 | 2 | 3 | 4 | 5 | 94 |

- I 3. Why do you feel that way?

I 4. Please turn to card 24. Could you tell me how much you agree or disagree with this statement:

There is not much that residents of (NAME OF DEVELOPMENT) can do to affect what happens in the area just outside (NAME OF DEVELOPMENT).

(CARD 24)

| | | | | | |
|----------------|-------|------------|----------|-------------------|-------|
| Strongly agree | Agree | In between | Disagree | Strongly disagree | D. K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

I 5. Do you feel that you're part of the area right outside (NAME OF DEVELOPMENT) or do you think of it more as just the area where you happen to live?

| | | |
|-------------------|-------------|--------------|
| Feel part of area | Area I live | Some of both |
| 1 | 3 | 2 |

I 6. Do you have any close adult friends or close adult relatives who live outside of (NAME OF DEVELOPMENT) within walking distance? In all these questions about close friends and relatives, close means people you feel close to.

| | |
|-----|----|
| Yes | No |
| 1 | 2 |

IF NO, SKIP TO I 9

- I 7. Please turn to card 25. In general, how often do you get together with close adult friends and close adult relatives who live outside of (NAME OF DEVELOPMENT) within walking distance, for instance to visit or to go out together?

(CARD 25)

| | |
|-----------------------|---|
| More than once a week | 6 |
| About once a week | 5 |
| A few times a month | 4 |
| About once a month | 3 |
| A few times a year | 2 |
| About once a year | 1 |

- I 8. How many close adult friends and close adult relatives do you have who live outside of (NAME OF DEVELOPMENT) within walking distance?

| |
|--------------|
| Number _____ |
|--------------|

- I 9. Do you have any close adult friends or close adult relatives in the rest of the city, outside of this area?

| | |
|-----|----|
| Yes | No |
| 1 | 2 |

↓

| |
|----------------------|
| IF NO SKIP TO J 1 |
|----------------------|

- I 10. In general, how often do you get together with close adult friends and close adult relatives who live in the rest of the city, outside of this area, for instance to visit or to go out together?

(CARD 25)

| | |
|-----------------------|---|
| More than once a week | 6 |
| About once a week | 5 |
| A few times a month | 4 |
| About once a month | 3 |
| A few times a year | 2 |
| About once a year | 1 |

- I 11. How many close adult friends and close adult relatives do you have who live in the rest of the city, outside of this area?

| |
|--------------|
| Number _____ |
|--------------|

Now, I'd like to talk about how you and your family use the areas outside your apartment.

J 1. Do you have a private balcony or sundeck?

| | |
|-----|----|
| Yes | No |
| 1 | 2 |

↓
 IF NO, SKIP TO J 5

J 2. Could you tell me, does this private balcony or sundeck face the public street?

| | |
|-----|----|
| Yes | No |
| 1 | 2 |

J 3. Please turn to card 26 . When the weather is nice, how often do you spend more than a few minutes out there?

(CARD 26)

| | |
|--------------------|---|
| Everyday | 7 |
| 2-3 times a week | 6 |
| Once a week | 5 |
| 2-3 times a month | 4 |
| Once a month | 3 |
| A few times a year | 2 |
| Almost never | 1 |

J 4. People use a private balcony or sundeck for different kinds of activities. Do you or members of your family use it for children's play?

(READ EACH ACTIVITY)

| | | |
|----------------------------|-------|------|
| Children's play | Yes 1 | No 2 |
| Sitting outside | Yes 1 | No 2 |
| Barbecuing or eating | Yes 1 | No 2 |
| Having friends over | Yes 1 | No 2 |
| Growing plants and flowers | Yes 1 | No 2 |
| Storing things | Yes 1 | No 2 |

J 5. Do you have a private yard or patio?

| | |
|-----|----|
| Yes | No |
| 1 | 2 |

IF NO, SKIP TO J 9

J 6. Could you tell me, is this private yard or patio next to the public street?

| | |
|-----|----|
| Yes | No |
| 1 | 2 |

J 7. Please turn to card 26 . When the weather is nice, how often do you spend more than a few minutes out there?

(CARD 26)

| | |
|--------------------|---|
| Everyday | 7 |
| 2-3 times a week | 6 |
| Once a week | 5 |
| 2-3 times a month | 4 |
| Once a month | 3 |
| A few times a year | 2 |
| Almost never | 1 |

J 8. People use a private yard or patio for different kinds of activities. Do you or members of your family use it for children's play?
(READ EACH ACTIVITY)

| | | |
|----------------------------|-------|------|
| Children's play | Yes 1 | No 2 |
| Sitting outside | Yes 1 | No 2 |
| Barbecuing or eating | Yes 1 | No 2 |
| Having friends over | Yes 1 | No 2 |
| Growing plants and flowers | Yes 1 | No 2 |
| Storing things | Yes 1 | No 2 |

These next questions are about the area just outside this building.

- J 9. Please turn to card 26. When the weather is nice, how often do you spend more than a few minutes in the area just outside this building? (EXCLUDING PRIVATE YARDS AND PATIOS)

(CARD 26)

| | |
|--------------------|---|
| Everyday | 7 |
| 2-3 times a week | 6 |
| Once a week | 5 |
| 2-3 times a month | 4 |
| Once a month | 3 |
| A few times a year | 2 |
| Almost never | 1 |

J 10. I'd like to talk about the kinds of things you do in the area just outside this building. (EXCLUDING PRIVATE YARD OR PATIO)

Do you ever use the area just outside this building for sitting by yourself?

(READ EACH ACTIVITY. RECORD SIDE COMMENTS)

J 11. (FOR EACH YES) How often do you do this - seldom, sometimes, or often?

| | J 10 | J 11 |
|---|-------|-------------|
| Sitting by yourself | Yes 1 | Seldom 1 |
| | No 2 | Sometimes 2 |
| | | Often 3 |
| Sitting with other residents you know | Yes 1 | Seldom 1 |
| | No 2 | Sometimes 2 |
| | | Often 3 |
| Sitting with members of your family or friends from outside the development | Yes 1 | Seldom 1 |
| | No 2 | Sometimes 2 |
| | | Often 3 |
| Playing with children or watching them play | Yes 1 | Seldom 1 |
| | No 2 | Sometimes 2 |
| | | Often 3 |
| Having a barbecue or picnic | Yes 1 | Seldom 1 |
| | No 2 | Sometimes 2 |
| | | Often 3 |
| Doing repair jobs like working on a car | Yes 1 | Seldom 1 |
| | No 2 | Sometimes 2 |
| | | Often 3 |

(IF ROW HOUSE SKIP TO PAGE 32)

(IF WALK UP OR HIGH RISE, ASK J 12, J 13 AND J 14)

- J 12. Some people use areas in the building like the hall, stairs, landings, entryway, a laundry room, or a recreation room for different kinds of activities. I'd like to know whether you use these areas for any of the activities that I will read.

Do you use areas in this building for sitting by yourself or with others?

(READ EACH ACTIVITY.)

- J 13. (FOR EACH YES) Where do you do this?

- J 14. How often do you do this - seldom, sometimes, or often?
(ASK FOR EACH ACTIVITY REPORTED IN EACH AREA)

J 13 and J 14

| J 12 | | Area near apt. door (corridor or landing) | Stairway | Lobby or entryway on ground floor | Laundry room | Recreation room, community room |
|--|-------|---|-------------|-----------------------------------|--------------|---------------------------------|
| Sitting by yourself or with others | Yes 1 | Seldom 1 | Seldom 1 | Seldom 1 | Seldom 1 | Seldom 1 |
| | No 2 | Sometimes 2 | Sometimes 2 | Sometimes 2 | Sometimes 2 | Sometimes 2 |
| | | Often 3 | Often 3 | Often 3 | Often 3 | Often 3 |
| Chatting with other residents | Yes 1 | Seldom 1 | Seldom 1 | Seldom 1 | Seldom 1 | Seldom 1 |
| | No 2 | Sometimes 2 | Sometimes 2 | Sometimes 2 | Sometimes 2 | Sometimes 2 |
| | | Often 3 | Often 3 | Often 3 | Often 3 | Often 3 |
| Playing with children and watching them play | Yes 1 | Seldom 1 | Seldom 1 | Seldom 1 | Seldom 1 | Seldom 1 |
| | No 2 | Sometimes 2 | Sometimes 2 | Sometimes 2 | Sometimes 2 | Sometimes 2 |
| | | Often 3 | Often 3 | Often 3 | Often 3 | Often 3 |
| Storing things like furniture or bicycles | Yes 1 | Seldom 1 | Seldom 1 | Seldom 1 | Seldom 1 | Seldom 1 |
| | No 2 | Sometimes 2 | Sometimes 2 | Sometimes 2 | Sometimes 2 | Sometimes 2 |
| | | Often 3 | Often 3 | Often 3 | Often 3 | Often 3 |

- J 15. How often is an adult at home in this apartment during the day -- usually, sometimes, or never?

| | | |
|---------|-----------|-------|
| Usually | Sometimes | Never |
| 3 | 2 | 1 |

- J 16. How often is an adult at home in this apartment during the evening -- usually, sometimes, or never?

| | | |
|---------|-----------|-------|
| Usually | Sometimes | Never |
| 3 | 2 | 1 |

- J 17. Suppose that a family with a little boy and a little girl moved into this building that you're living in now. At what age could they let the boy and the girl go outdoors to play without an adult?

| | |
|------------------|-------------------|
| Age of boy _____ | Age of girl _____ |
| Don't know | 94 |

- J 18. Do you have any children who are 16 years old or younger?

| | |
|-----|----|
| Yes | No |
| 1 | 2 |

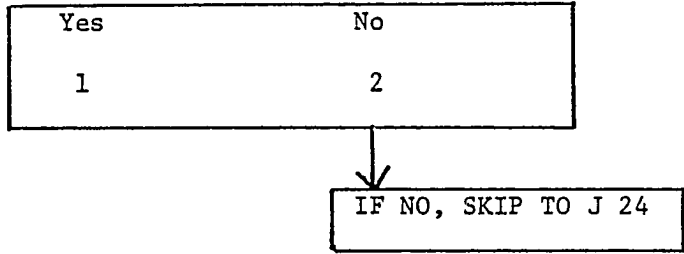
IF NO, SKIP TO PAGE 36 .

- J 19. Do you let any of them go outdoors to play without you or any other adult?

| | |
|-----|----|
| Yes | No |
| 1 | 2 |

IF NO, SKIP TO PAGE 35 .

J 20. Think of your children who are 16 and under who go outdoors alone to play. Are there any particular places outside where you prefer them to play?



J 21. Where do you prefer them to play?
(RECORD AREAS IN CHART BELOW)

J 22. Why do you prefer them to play there?
(RECORD REASON OR REASONS FOR EACH AREA.)

J 23. Can you see these places from your apartment?

| J 21 (Area) | J 22 (Reason) | J 23 (See from Apartment) |
|---|---|---------------------------|
| Area 1: _____ _____ _____ _____ _____ | _____ _____ _____ _____ _____ | Yes 1 No 2 |
| Area 2: _____ _____ _____ _____ _____ | _____ _____ _____ _____ _____ | Yes 1 No 2 |
| Area 3: _____ _____ _____ _____ _____ | _____ _____ _____ _____ _____ | Yes 1 No 2 |

J 24. Do you worry if any of your children are playing outside where you cannot see them from your apartment?

| | |
|-----|----|
| Yes | No |
| 1 | 2 |

↓
IF NO, SKIP TO PAGE 35 .

J 25. What is the age and the sex of the ones you worry about the most?

| | |
|-----------|-----------|
| Age _____ | Sex _____ |
| Age _____ | Sex _____ |
| Age _____ | Sex _____ |
| Age _____ | Sex _____ |

(IF ROW HOUSE, SKIP TO PAGE 36 .)

(IF WALK UP OR HIGH RISE, GO TO J 26)

- J 26. (WALK UP AND HIGH RISE ONLY) Are there any places in this building, not in the apartments, where your children play? (EITHER ALONE OR WITH ADULT)

| | |
|----------|---------|
| Yes 1 | No 2 |
|----------|---------|

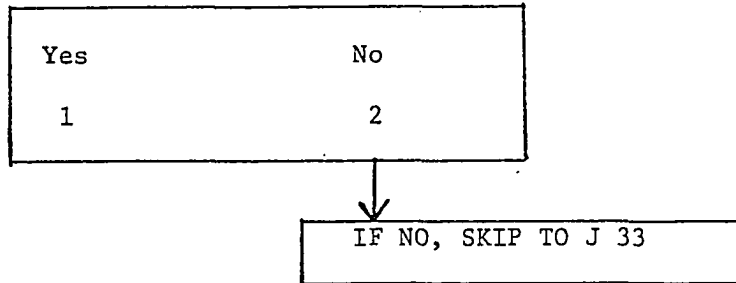
↓
IF NO, SKIP TO PAGE 36 .

- J 27. What are these places?

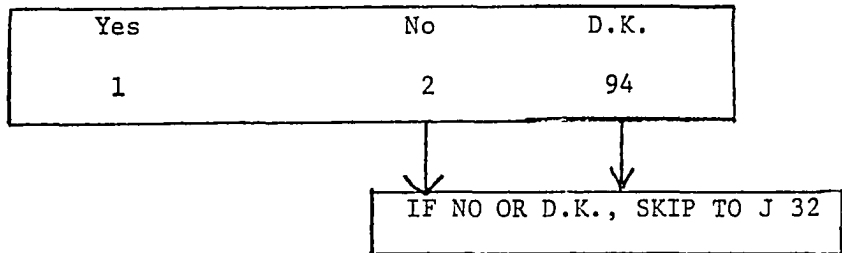
- J 28. How old are your children who play there?

| |
|---------------------|
| Age (or ages) _____ |
|---------------------|

J 29. Do teenagers or young adults ever gather near the front of this building?



J 30. Does this cause any problems for anyone?



J 31. What problems does it cause? (CIRCLE ALL THAT APPLY)

| | |
|---|----|
| <i>They make noise</i> | 1 |
| <i>They block passage, hard to get by</i> | 2 |
| <i>There are fights, trouble, disagreements</i> | 3 |
| <i>They commit crimes, destroy property</i> | 4 |
| <i>They frighten people</i> | 5 |
| <i>They smoke pot, drink</i> | 6 |
| <i>They bother children</i> | 7 |
| <i>They break windows</i> | 8 |
| <i>Other (SPECIFY) _____</i> | 92 |
| _____ | |
| _____ | |
| _____ | |
| _____ | |

J 32. In your opinion, are these teenagers or young adults mostly from this development or mostly from outside the development?

| | | | |
|-------------------------|---------------------|--------------|-------|
| Mostly from development | Mostly from outside | Some of both | D. K. |
| 1 | 2 | 3 | 94 |

J 33. Are there any other places around here in (NAME OF DEVELOPMENT) where teenagers like to gather?

| | | |
|-----|----|-------|
| Yes | No | D. K. |
| 1 | 2 | 94 |

| |
|--------------------------------|
| IF NO OR D. K. SKIP TO J 37 |
|--------------------------------|

J 34. Where do they gather? (CIRCLE ALL THAT APPLY)

| | | | |
|-------------------------|---|-----------------------------|----|
| <i>Corridors, halls</i> | 1 | <i>Play area</i> | 7 |
| <i>Stairs</i> | 2 | <i>Sidewalk</i> | 8 |
| <i>Entryway, lobby</i> | 3 | <i>All over development</i> | 9 |
| <i>Community room</i> | 4 | <i>Other (SPECIFY)</i> | 92 |
| <i>Recreation room</i> | 5 | | |
| <i>Parking lot</i> | 6 | | |
| | | _____ | |
| | | _____ | |
| | | _____ | |
| | | _____ | |

J 35. Does their gathering in these places ever cause any problems for anyone?

| | | |
|-----|----|-------|
| Yes | No | D. K. |
| 1 | 2 | 94 |

| |
|-----------------------------|
| IF NO OR D.K., SKIP TO J 37 |
|-----------------------------|

J 36. What problems does it cause? (CIRCLE ALL THAT APPLY)

| | |
|---|----|
| <i>They make noise</i> | 1 |
| <i>They block passage, hard to get by</i> | 2 |
| <i>There are fights, trouble, disagreements</i> | 3 |
| <i>They commit crimes, destroy property</i> | 4 |
| <i>They frighten people</i> | 5 |
| <i>They smoke pot, drink</i> | 6 |
| <i>They bother children</i> | 7 |
| <i>They break windows</i> | 8 |
| <i>Other (SPECIFY)</i> _____ | 92 |
| _____ | |
| _____ | |
| 318 | |

J 37. Now I have a few questions about parking. Do you have a car?

| | |
|-----|----|
| Yes | No |
| 1 | 2 |

↓
IF NO, SKIP TO K 1

J 38. Think of where you usually park it. Can you see your car from your apartment when you park it there?

| | |
|-----|----|
| Yes | No |
| 1 | 2 |

J 39. Do you park near the entrance to this building?

| | |
|-----|----|
| Yes | No |
| 1 | 2 |

J 40. Please turn to card 27 . How safe from crime is your car in the place where you usually park it?

(CARD 27)

| | | | | | |
|----------------------|--------------------|----------------------|--------|----------------|-------|
| Safe (not unsafe) | Slightly unsafe | Moderately unsafe | Unsafe | Very unsafe | D. K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

(IF ROW HOUSE SKIP TO PAGE 40)

(IF WALK UP OR HIGH RISE ASK K 1, K 2, AND K 3)

Some people who live in housing like this like to take care of areas in the building like the hall, the stairway, the entryway on the ground floor and so on.

K 1. Do you, or does anyone in your family do any cleaning of areas in this building--such as sweeping or washing the floor or walls? (READ EACH ACTIVITY. RECORD ALL SIDE COMMENTS.)

K 2. (FOR EACH YES) Where do you do this?

K 3. How often do you do this - seldom, sometimes, or often?
(ASK FOR EACH ACTIVITY REPORTED IN EACH AREA).

K 2 and K 3

| K 1 | | Area Near Apartment Door (Hallway of Landing) | Stairway | Lobby or Entrance on the Ground Floor |
|--|-------|--|-------------|--|
| Cleaning areas: such as sweeping or washing the floor or walls | Yes 1 | Seldom 1 | Seldom 1 | Seldom 1 |
| | No 2 | Sometimes 2 | Sometimes 2 | Sometimes 2 |
| | | Often 3 | Often 3 | Often 3 |
| Picking up litter | Yes 1 | Seldom 1 | Seldom 1 | Seldom 1 |
| | No 2 | Sometimes 2 | Sometimes 2 | Sometimes 2 |
| | | Often 3 | Often 3 | Often 3 |
| Mending something that is broken or putting in a new light bulb | Yes 1 | Seldom 1 | Seldom 1 | Seldom 1 |
| | No 2 | Sometimes 2 | Sometimes 2 | Sometimes 2 |
| | | Often 3 | Often 3 | Often 3 |
| Painting a wall or some of the trim | Yes 1 | Seldom 1 | Seldom 1 | Seldom 1 |
| | No 2 | Sometimes 2 | Sometimes 2 | Sometimes 2 |
| | | Often 3 | Often 3 | Often 3 |

Now I'd like to talk about the area just outside this building. Some people who live in housing like this like to take care of the area just outside.

K 4. Do you or members of your family do any cleaning, such as sweeping, raking, or hosing down the area just outside this building? (READ EACH ACTIVITY. RECORD ALL SIDE COMMENTS.)

K 5. (FOR EACH YES) How often do you do this - seldom, sometimes, or often?

| | K 4 | K 5 |
|--|---------------|------------------------------------|
| Cleaning: such as sweeping, raking or hosing down a paved area | Yes 1 No 2 | Seldom 1 Sometimes 2 Often 3 |
| Picking up litter | Yes 1 No 2 | Seldom 1 Sometimes 2 Often 3 |
| Planting grass, flowers or plants | Yes 1 No 2 | Seldom 1 Sometimes 2 Often 3 |
| Building: like building a fence, a patio, or something else | Yes 1 No 2 | Seldom 1 Sometimes 2 Often 3 |
| Repairing: such as fixing a light, fixing a bench or painting | Yes 1 No 2 | Seldom 1 Sometimes 2 Often 3 |

These next questions are about things that you think other residents would do in certain situations. Please turn to card 28.

- L 1. Suppose three 13-year-old boys, who were strangers, were spray painting graffiti on the walk just in front of this building. How likely is it that a resident of this building who saw them would tell them not to do that?

(CARD 28)

| | | | | | |
|---------------|-------------------|--------------|-----------------|-------------|-------|
| Very unlikely | Somewhat unlikely | 50-50 chance | Somewhat likely | Very likely | D. K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

IF VERY UNLIKELY
SKIP TO L 3

IF D. K.,
SKIP TO L 3

- L 2. How likely is it that the kids would stop painting graffiti?

(CARD 28)

| | | | | | |
|---------------|-------------------|--------------|-----------------|-------------|-------|
| Very unlikely | Somewhat unlikely | 50-50 chance | Somewhat likely | Very likely | D. K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

- L 3. If the kids kept on painting graffiti on the walk, how likely is it that the resident who saw them would call the police or management?

(CARD 28)

| | | | | | |
|---------------|-------------------|--------------|-----------------|-------------|-------|
| Very unlikely | Somewhat unlikely | 50-50 chance | Somewhat likely | Very likely | D. K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

(IF ROW HOUSE, SKIP TO PAGE 43.)

(IF WALK UP OR HIGH RISE, GO TO L 4)

- L 4. (WALK UP OR HIGH RISE ONLY) I would like to ask you these same questions about the corridor or landing on this floor. Suppose three 13-year-old boys, who were strangers, were spray painting graffiti in the hallway or landing on this floor. How likely is it that a resident on this floor who saw them would ask them to stop?

(CARD 28)

| | | | | | |
|---------------|-------------------|--------------|-----------------|-------------|-------|
| Very unlikely | Somewhat unlikely | 50-50 chance | Somewhat likely | Very likely | D. K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

IF VERY UNLIKELY,
SKIP TO L 6

IF D. K.,
SKIP TO L 6

- L 5. How likely is it that the kids would stop painting graffiti?

(CARD 28)

| | | | | | |
|---------------|-------------------|--------------|-----------------|-------------|-------|
| Very unlikely | Somewhat unlikely | 50-50 chance | Somewhat likely | Very likely | D. K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

- L 6. If the kids kept on painting graffiti, how likely is it that the resident who saw them would call the management or the police?

(CARD 28)

| | | | | | |
|---------------|-------------------|--------------|-----------------|-------------|-------|
| Very unlikely | Somewhat unlikely | 50-50 chance | Somewhat likely | Very likely | D. K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

- L 7. Please turn to card 29. Suppose that two young men about 19 or 20 whom residents did not recognize were standing around near the front of this building. Suppose they looked suspicious. Which one of the things listed on this card do you think residents of this building would probably do?
 (ACCEPT ONLY ONE ANSWER)

(CARD 29)

| | |
|---|----|
| Go out and ask them who they're looking for | 1 |
| Call the city police | 2. |
| Call the security guard or housing police | 3 |
| Call the management | 4 |
| Keep an eye on them | 5 |
| Forget about it | 6 |
| D. K. | 94 |
| Other (SPECIFY) _____ | 92 |
| _____ | |
| _____ | |
| _____ | |
| _____ | |
| _____ | |

- L 8. Please turn to card 30. If someone were attacked right outside this building, and called out for help, how likely is it that a resident of this building would help in some way?

(CARD 30)

| | | | | | |
|---------------|-------------------|--------------|-----------------|-------------|------|
| Very unlikely | Somewhat unlikely | 50-50 chance | Somewhat likely | Very likely | D.K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

Now I'd like to talk about what you think you would do in certain situations.

- L 9. Suppose a bunch of kids you didn't know who looked about 7 or 8 years old were fighting and shouting. Suppose this was going on about 15 feet from your front door. (COULD BE ON THE STAIRS) How likely or unlikely is it that you would ask them to stop? (RECORD SIDE COMMENTS.)

(CARD 30)

| | | | | | |
|---------------|-------------------|--------------|-----------------|-------------|-------|
| Very unlikely | Somewhat unlikely | 50-50 chance | Somewhat likely | Very likely | D. K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

- L 10. Please turn to card 31. Imagine that you were coming out of your apartment. And you saw a young man you did not recognize fooling around with the front door of the apartment that is nearest to yours. Which of the things listed on this card would you probably do?
(ACCEPT ONLY ONE ANSWER)

(CARD 31)

| | |
|---------------------------------------|----|
| Figure he's a friend of my neighbor's | 1 |
| Forget about it | 2 |
| Ask him if he needed help | 3 |
| Call the police or security guard | 4 |
| Call the management | 5 |
| D. K. | 94 |
| Other (SPECIFY) _____ | 92 |
| _____ | |
| _____ | |
| _____ | |
| _____ | |

- L 11. Please turn to card 32. Suppose you were coming home around supper time and you saw two young men who looked suspicious standing around near the door to your apartment. Suppose you had to walk past them to get into your apartment. What do you think you would probably do?
(ACCEPT ONLY ONE ANSWER)

(CARD 32)

| | |
|--|----|
| Turn back and wait until the men went away | 1 |
| Go to a neighbor's apartment and wait until the men went away | 2 |
| Go to a neighbor's apartment and ask them to go with you to your apartment | 3 |
| Go past the men into your apartment | 4 |
| Ask the men who they were looking for | 5 |
| D. K. | 94 |
| Other (SPECIFY) _____ | 92 |
| _____ | |
| _____ | |
| _____ | |

Please turn to card 33. I am going to read you a list of problems that exist in some buildings in some housing developments. For each problem that I mention, I'd like you to tell me how much of a problem it is in this building you're living in now.

M 1. People breaking windows.

(CARD 33)

| No problem at all | A small problem | A moderate problem | A big problem | A very big problem | D. K. |
|-------------------|-----------------|--------------------|---------------|--------------------|-------|
| 1 | 2 | 3 | 4 | 5 | 94 |

M 2. People breaking outdoor lights near this building.

(CARD 33)

| No problem at all | A small problem | A moderate problem | A big problem | A very big problem | D. K. |
|-------------------|-----------------|--------------------|---------------|--------------------|-------|
| 1 | 2 | 3 | 4 | 5 | 94 |

M 3. People writing grafitti on the walls or outside.

(CARD, 33)

| No problem at all | A small problem | A moderate problem | A big problem | A very big problem | D. K. |
|-------------------|-----------------|--------------------|---------------|--------------------|-------|
| 1 | 2 | 3 | 4 | 5 | 94 |

M 4. People breaking locks to the doors of this building.

(CARD 33)

| No problem at all | A small problem | A moderate problem | A big problem | A very big problem | D. K. |
|-------------------|-----------------|--------------------|---------------|--------------------|-------|
| 1 | 2 | 3 | 4 | 5 | 94 |

M 5. People vandalizing cars in the parking areas.

(CARD 33)

| No problem at all | A small problem | A moderate problem | A big problem | A very big problem | N.A. No parking areas in development | D. K. |
|----------------------|--------------------|-----------------------|------------------|--------------------------|---|-------|
| 1 | 2 | 3 | 4 | 5 | 91 | 94 |

(IF R RESPONDED "No problem at all" TO ALL QUESTIONS, SKIP TO PAGE 48.)

M 6. Are the people who do these things mostly from (NAME OF DEVELOPMENT) or from outside?

| From development | Outside | Both from development and outside | D. K. |
|---------------------|---------|---|-------|
| 1 | 2 | 3 | 94 |

M 7. Turn to card 34. About how old are most of them? (R CAN CHOOSE MORE THAN ONE ANSWER.)

(CARD 34)

| | |
|-------------|----|
| Under 8 | 1 |
| 8-10 | 2 |
| 11-12 | 3 |
| 13-15 | 4 |
| 16-18 | 5 |
| 19 and over | 6 |
| D. K. | 94 |

(IF HIGH RISE ASK N 1 to N 7)

(IF WALK UP SKIP TO PAGE 50)

(IF ROW HOUSE SKIP TO PAGE 52)

Please turn to card 35. I'm going to read you a list of places and I would like you to tell me how safe or unsafe each of them is at night. By safe, I mean safe from crime.

(HIGH RISE)

N 1. At night, how safe is the elevator?

(CARD 35)

| Safe (Not unsafe) | Slightly unsafe | Moderately unsafe | Unsafe | Very unsafe | D.K. |
|----------------------|--------------------|----------------------|--------|----------------|------|
| 1 | 2 | 3 | 4 | 5 | 94 |

N 2. At night, how safe is the area right in front of this building?

(CARD 35)

| Safe (Not unsafe) | Slightly unsafe | Moderately unsafe | Unsafe | Very unsafe | D.K. |
|----------------------|--------------------|----------------------|--------|----------------|------|
| 1 | 2 | 3 | 4 | 5 | 94 |

N 3. At night, how safe is the area right in back of this building?

(CARD 35)

| Safe (Not unsafe) | Slightly unsafe | Moderately unsafe | Unsafe | Very unsafe | D.K. |
|----------------------|--------------------|----------------------|--------|----------------|------|
| 1 | 2 | 3 | 4 | 5 | 94 |

(HIGH RISE CONTD.)

N 4. How about the firestairs?

(CARD 35)

| Safe (Not unsafe) | Slightly unsafe | Moderately unsafe | Unsafe | Very unsafe | D.K. |
|----------------------|--------------------|----------------------|--------|----------------|------|
| 1 | 2 | 3 | 4 | 5 | 94 |

N 5. The lobby on the ground floor?

(CARD 35)

| Safe (Not unsafe) | Slightly unsafe | Moderately unsafe | Unsafe | Very unsafe | D.K. |
|----------------------|--------------------|----------------------|--------|----------------|------|
| 1 | 2 | 3 | 4 | 5 | 94 |

N 6. The public sidewalk that is nearest your apartment?

(CARD 35)

| Safe (Not unsafe) | Slightly unsafe | Moderately unsafe | Unsafe | Very unsafe | D.K. |
|----------------------|--------------------|----------------------|--------|----------------|------|
| 1 | 2 | 3 | 4 | 5 | 94 |

N 7. The corridor just outside your door?

(CARD 35)

| Safe (Not unsafe) | Slightly unsafe | Moderately unsafe | Unsafe | Very unsafe | D.K. |
|----------------------|--------------------|----------------------|--------|----------------|------|
| 1 | 2 | 3 | 4 | 5 | 94 |

(WALK UP)

Please turn to card 35. I'm going to read you a list of places and I would like you to tell me how safe or unsafe each of them is at night. By safe, I mean safe from crime.

N 8. At night, how safe is the stairway?

(CARD 35)

| Safe (Not unsafe) | Slightly unsafe | Moderately unsafe | Unsafe | Very unsafe | D.K. |
|----------------------|--------------------|----------------------|--------|----------------|------|
| 1 | 2 | 3 | 4 | 5 | 94 |

N 9. At night, how safe is the area right in front of this building?

(CARD 35)

| Safe (Not unsafe) | Slightly unsafe | Moderately unsafe | Unsafe | Very unsafe | D.K. |
|----------------------|--------------------|----------------------|--------|----------------|------|
| 1 | 2 | 3 | 4 | 5 | 94 |

N 10. (ASK ONLY IF THERE IS AN INDOOR STAIRWAY) How about the lobby or entryway on the ground floor?

(CARD 35)

| Safe (Not unsafe) | Slightly unsafe | Moderately unsafe | Unsafe | Very unsafe | D.K. |
|----------------------|--------------------|----------------------|--------|----------------|------|
| 1 | 2 | 3 | 4 | 5 | 94 |

(WALK UP CONTD.)

N 11. The public sidewalk that is nearest your apartment?

(CARD 35)

| Safe (Not unsafe) | Slightly unsafe | Moderately unsafe | Unsafe | Very Unsafe | D.K. |
|----------------------|--------------------|----------------------|--------|----------------|------|
| 1 | 2 | 3 | 4 | 5 | 94 |

N 12. The area right in back of this building?

(CARD 35)

| Safe (Not unsafe) | Slightly unsafe | Moderately unsafe | Unsafe | Very unsafe | D.K. |
|----------------------|--------------------|----------------------|--------|----------------|------|
| 1 | 2 | 3 | 4 | 5 | 94 |

N 13. The landing just outside your door?

(CARD 35)

| Safe (Not unsafe) | Slightly unsafe | Moderately unsafe | Unsafe | Very unsafe | D.K. |
|----------------------|--------------------|----------------------|--------|----------------|------|
| 1 | 2 | 3 | 4 | 5 | 94 |

SKIP TO PAGE 53

(ROW HOUSE)

Please turn to card 35. I'm going to read you a list of places and I would like you to tell me how safe or unsafe each of them is at night. By safe, I mean safe from crime.

N 14. At night, how safe is the public sidewalk that is nearest your apartment?

(CARD 35)

| Safe (Not unsafe) | Slightly unsafe | Moderately unsafe | Unsafe | Very unsafe | D.K. |
|----------------------|--------------------|----------------------|--------|----------------|------|
| 1 | 2 | 3 | 4 | 5 | 94 |

N 15. At night, how safe is the area right in back of your building?

(CARD 35)

| Safe (Not unsafe) | Slightly unsafe | Moderately unsafe | Unsafe | Very unsafe | D.K. |
|----------------------|--------------------|----------------------|--------|----------------|------|
| 1 | 2 | 3 | 4 | 5 | 94 |

N 16. How about the area right outside your front door?

(CARD 35)

| Safe (Not unsafe) | Slightly unsafe | Moderately unsafe | Unsafe | Very unsafe | D.K. |
|----------------------|--------------------|----------------------|--------|----------------|------|
| 1 | 2 | 3 | 4 | 5 | 94 |

(FOR ALL RESPONDENTS)

N 17. Think of the areas at (NAME OF DEVELOPMENT) that are the most dangerous at night.

What makes those areas dangerous?
 (CIRCLE ALL THAT APPLY)

| | |
|---|----|
| Poor lighting | 1 |
| A crime was (crimes were) committed there | 2 |
| Teenagers hang out there | 3 |
| Addicts, winos hang out there | 4 |
| Closed in, no way to get out | 5 |
| Isolated, no one around | 6 |
| No one will come to help | 7 |
| No one can see you when you're there | 8 |
| Traffic is dangerous | 9 |
| Police never patrol that area | 10 |
| Other (SPECIFY) _____ | 92 |
| _____ | |
| _____ | |
| _____ | |
| _____ | |

(IF WALK UP OR HIGH RISE ASK 0 1)

(IF ROW HOUSE, SKIP TO 0 2)

- 0 1. (WALK UP AND HIGH RISE ONLY) Please turn to card 36. At night, how worried are you about being held up, threatened, beaten up, or anything of that sort in areas in this building outside your apartment?

(CARD 36)

| | | | | | |
|-----------------------|---------------------|-----------------------|---------|-----------------|----|
| Not at all worried | A little worried | Moderately worried | Worried | Very worried | DK |
| 1 | 2 | 3 | 4 | 5 | 94 |

- 0 2. At night, how worried are you about being held up, threatened, beaten up, or anything of that sort right outside this building?

(CARD 36)

| | | | | | |
|-----------------------|---------------------|-----------------------|---------|-----------------|----|
| Not at all worried | A little worried | Moderately worried | Worried | Very worried | DK |
| 1 | 2 | 3 | 4 | 5 | 94 |

- 0 3. Please turn to card 37. During the course of this next year, how likely is it that someone would break into your apartment when no one is home?

(CARD 37)

| | | | | | |
|------------------|----------------------|-----------------|--------------------|----------------|----|
| Very unlikely | Somewhat unlikely | 50-50 chance | Somewhat likely | Very likely | DK |
| 1 | 2 | 3 | 4 | 5 | 94 |

- 0 4. How much crime do you think occurs in this development compared to the area just outside it -- more crime in the development than outside, about the same amount, or less crime in the development?

| More crime | About the same amount | Less crime | DK |
|------------|-----------------------|------------|----|
| 1 | 2 | 3 | 94 |

- 0 5. In your opinion, over this last year, has the amount of crime occurring in this development increased, decreased, or has it stayed about the same?

| Increased | Decreased | Stayed the same | DK |
|-----------|-----------|-----------------|----|
| 3 | 1 | 2 | 94 |

- 0 6. Do you ever return home alone after dark?

| Yes | No |
|-----|----|
| 1 | 2 |

- 0 7. Do you ever stay home instead of going out because you're afraid of crime?

| Yes | No |
|-----|----|
| 1 | 2 |

0 8. Do you and your neighbors ever make arrangements to watch one another's apartments when you are not at home?

| | |
|-----|----|
| Yes | No |
| 1 | 2 |

0 9. Have you installed any locks on your doors or windows?

| | |
|-----|----|
| Yes | No |
| 1 | 2 |

↓
IF NO, SKIP TO 0 11

0 10. How many locks have you installed?

Number _____

0 11. What else do you do to protect yourself and your apartment from crime? (CIRCLE ALL THAT APPLY)

| | |
|--|----|
| <i>Lock door, check door, keep chain on</i> | 1 |
| <i>Don't open my door unless I know the person</i> | 2 |
| <i>Lock windows, check windows</i> | 3 |
| <i>Have a dog</i> | 4 |
| <i>Leave radio or TV on</i> | 5 |
| <i>Leave lights on</i> | 6 |
| <i>I don't bother people, stay out of the way</i> | 7 |
| <i>I watch out, I'm careful when I go out or come in</i> | 8 |
| <i>Nothing else I do</i> | 89 |
| <i>Other (SPECIFY) _____</i> | 92 |
| _____ | |
| _____ | |
| _____ | |
| 337 | |

Now I'd like to talk a little about security guards and the city police.

- P 1. Are there security guards or housing police who patrol (NAME OF DEVELOPMENT)?

| | | |
|-----|----|------|
| Yes | No | D.K. |
| 1 | 2 | 94 |

IF NO OR D.K., SKIP TO P 3

- P 2. Please turn to card 38. Overall, how would you rate the job they do protecting people in (NAME OF DEVELOPMENT)?

(CARD 38)

| | | | | | |
|----------|-----|------------|------|-----------|------|
| Very bad | Bad | In between | Good | Very good | D.K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

- P 3. Please turn to card 39. When someone in (NAME OF DEVELOPMENT) calls the city police for help, how long does it usually take for them to get here?

(CARD 39)

| | |
|-----------------------------|----|
| Come right away | 1 |
| Within 20 minutes | 2 |
| From 20 minutes to one hour | 3 |
| More than 1 hour | 4 |
| Not until the next day | 5 |
| Don't come at all | 6 |
| D.K. | 94 |

- P 4. Please turn to card 40. How much do you think the city police care about the safety of the people in (NAME OF DEVELOPMENT)?
(CARD 40)

| | | | | |
|----------------------|------------------|------------------|---------------|------|
| Don't care at all | Care a little | Care somewhat | Care a lot | D.K. |
| 1 | 2 | 3 | 4 | 94 |

- P 5. Please turn to card 41. Overall, how would you rate the job the (NAME OF CITY) Police Department does protecting people in (NAME OF DEVELOPMENT)?

(CARD 41)

| | | | | | |
|-------------|-----|------------|------|--------------|------|
| Very bad | Bad | In between | Good | Very good | D.K. |
| 1 | 2 | 3 | 4 | 5 | 94 |

- P 6. How does this compare to the job the police do in the rest of the city--do they do a better job here at (NAME OF DEVELOPMENT), a worse job, or is it about the same as in the rest of the city?

| | | | |
|---------------|------|--------------|------|
| Better job | Same | Worse job | D.K. |
| 1 | 2 | 3 | 94 |

- P 7. Turn to card 42. How many people at (NAME OF DEVELOPMENT) do you think would be willing to answer questions to help the police find a person who had committed a crime, such as a burglary?

(CARD 42)

| | |
|---------------|---|
| All of them | 5 |
| Most of them | 4 |
| Some of them | 3 |
| A few of them | 2 |
| Almost none | 1 |

Now, in this section, I would like to ask you about any experience you, not your friends or members of your family, may have had with crime. This includes experiences that occurred in this development and anywhere else. All of these questions concern experiences that you may have had during the last 12 months, that is between (MONTH) 1975 and (MONTH) 1976 only.

(ASK Q1 TO Q5. ONLY COMPLETE Q c through Q i ON THE FACING PAGE WHEN R ANSWERS "YES" TO ONE OF THE QUESTIONS BELOW.)

- Q 1a. During the past 12 months did anyone enter your apartment without your permission and then steal something?

| | Yes | No | D. K. |
|--|-----|----|-------|
| (IF YES, ASK Q1b AND c-i ON FACING PAGE. IF NO OR D.K., SKIP TO Q2.) | 1 | 2 | 94 |

- Q 1b. How many times did this happen?

Number _____ (THIS IS THE NUMBER OF TICKETS TO FILL OUT FOR Q1.)

- Q 2a. (Other than that) Did you find any sign that someone tried to break into your apartment but did not succeed, such as a forced window or lock, or a jimmied door?

| | Yes | No | D. K. |
|--|-----|----|-------|
| (IF YES, ASK Q2b AND c-i ON FACING PAGE. IF NO OR D.K., SKIP TO Q3.) | 1 | 2 | 94 |

- Q 2b. How many times did this happen?

Number _____ (THIS IS THE NUMBER OF TICKETS TO FILL OUT FOR Q2.)

- Q 3a. Did anyone break into or try to break into your mailbox in the past year?

| | Yes | No | D. K. |
|--|-----|----|-------|
| (IF YES, ASK Q3b AND c-i ON FACING PAGE. IF NO OR D.K., SKIP TO Q4.) | 1 | 2 | 94 |

- Q 3b. How many times did this happen?

Number _____ (THIS IS THE NUMBER OF TICKETS TO FILL OUT FOR Q3.)

- Q 4a. Did you have any property stolen that you left outside your apartment, such as something taken from your car, part or all of your car, or something that you just left outside?

| | Yes | No | D. K. |
|--|-----|----|-------|
| (IF YES, ASK Q4b AND c-i ON FACING PAGE. IF NO OR D.K., SKIP TO Q5.) | 1 | 2 | 94 |

- Q 4b. How many times did this happen?

Number _____ (THIS IS THE NUMBER OF TICKETS TO FILL OUT FOR Q4.)

- Q 5a. Did anyone purposely destroy or damage anything belonging to you, including your apartment or car, such as breaking your windows or slashing your car's tires?

| | Yes | No | D. K. |
|---|-----|----|-------|
| (IF YES, ASK Q5b AND c-i ON FACING PAGE. THEN GO TO Q6. IF NO OR D.K., SKIP TO Q6 NOW.) | 1 | 2 | 94 |

- Q 5b. How many times did this happen?

Number _____ (THIS IS THE NUMBER OF TICKETS TO FILL OUT FOR Q5.)

INCIDENT TICKET

RESPONDENT ID # _____

FOR QUESTION Q _____

(ASK Q c TO Q i FOR EACH INCIDENT. ENTER THE QUESTION NUMBER AT THE TOP OF EACH INCIDENT TICKET.)

Could you answer some questions about this incident for me?
(COMPLETE ONE TICKET PER INCIDENT.)

c. Month _____

Q c. What month did this crime happen?

d. Time _____ D. K. 94

Q d. What time did it happen?

e. *Within development:*

- My apartment 1 Lobby 5
- Hall 2 Parking Lot 6
- Elevator 3 Play area 7
- Stairs 4 On grounds 8
- Other 92 (DESCRIBE) _____

Q e. Could you describe where it took place?

(CIRCLE ONLY ONE ANSWER)

-
- Near development 9
 - Elsewhere in this city 10
 - Outside of this city 11

f. Value \$ _____ D.K. Value 94
N.A. 91

Q f. If anything was actually stolen, about how much was it worth when new?

g. Yes 1 No 2 N.A. 91

Q g. Was the property returned or were you otherwise paid for your loss?

h. Yes 1 No 2

Q h. Did you or anyone else tell the police about the crime?

(IF NO, ASK Q i. IF YES SKIP TO INSTRUCTION AT BOTTOM OF PAGE.)

- i. *Nothing could be done/*
- Lack of proof 1
 - Didn't think it was important enough 2
 - Police wouldn't want to be bothered 3
 - Inconvenient, didn't want to take time 4
 - Too private and personal to report 5
 - Did not want to get involved 6
 - Afraid of getting hurt/Reprisal 7
 - Reported it to someone else 8
 - Other reason (SPECIFY) 92

Q i. Why wasn't this incident reported to the police?

(CIRCLE ALL THAT APPLY.)

(IF MORE INCIDENTS OF THE SAME TYPE.)

Now I'd like to ask you about the other crime like this one. (ASK c-i. FILL OUT NEW INCIDENT TICKET.)

(IF THERE ARE NO MORE INCIDENTS OF THIS TYPE RETURN TO QUESTIONS ON THE FACING PAGE.)

(ASK Q6 TO Q9. ONLY COMPLETE Q d through Q s ON THE FACING PAGE WHEN R ANSWERS "YES" TO ONE OF THE QUESTIONS BELOW.)

Q 6a. During the past 12 months did anyone you knew enter your apartment with your permission, such as a neighbor or repairman, and then steal something?

| | | | |
|---|-----|----|-------|
| | Yes | No | D. K. |
| (IF YES, ASK Q6b AND d-s ON FACING PAGE. IF NO OR D.K., SKIP TO Q7.) | 1 | 2 | 94 |

Q 6b. How many times did this happen?

Number _____ (THIS IS THE NUMBER OF TICKETS TO FILL OUT FOR Q6.)

Q 7a. During the past 12 months did anyone try to take something from you, such as a wallet or purse, without using force or threat of force?

| | | | |
|--|-----|----|-------|
| | Yes | No | D. K. |
| (IF YES, ASK Q7b AND d-s ON FACING PAGE. IF NO OR D. K., SKIP TO Q8.) | 1 | 2 | 94 |

Q 7b. How many times did this happen?

Number _____ (THIS IS THE NUMBER OF TICKETS TO FILL OUT FOR Q7.)

Q 8a. During the past 12 months did anyone try to take something from you, such as a wallet or purse, by using force or the threat of force:

| | | | |
|---|-----|----|-------|
| | Yes | No | D. K. |
| (IF YES, ASK Q8b AND d-s ON FACING PAGE. IF NO OR D.K., SKIP TO Q9.) | 1 | 2 | 94 |

Q 8b. How many times did this happen?

Number _____ (THIS IS THE NUMBER OF TICKETS TO FILL OUT FOR Q8.)

Q 9a. Other than during such a robbery or attempted robbery, were you or any member of your household threatened or injured with any weapon or tool, beaten up, or attacked?

| | | | |
|---|-----|----|-------|
| | Yes | No | D. K. |
| (IF YES, ASK Q9b, Q9c AND d-s ON FACING PAGE. THEN GO TO Q10. IF NO OR D.K. GO TO Q10 NOW.) | 1 | 2 | 94 |

Q9b. How many times did this happen?

Number _____ (THIS IS THE NUMBER OF TICKETS TO FILL OUT FOR Q9.)

Q9c. Whom did this happen to?
(FOR EACH INCIDENT, CIRCLE "1" IN APPROPRIATE BOX OR BOXES.)

| | Incident Number | | | | |
|---------------|-----------------|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| Respondent | 1 | 1 | 1 | 1 | 1 |
| Family member | 1 | 1 | 1 | 1 | 1 |

INCIDENT TICKET
RESPONDENT ID # _____

FOR QUESTION Q _____

d. Month _____

e. Time _____ D.K. 94

f. Within development:

| | | | |
|--------------|----|-------------|-------|
| My apartment | 1 | Lobby | 5 |
| Hall | 2 | Parking Lot | 6 |
| Elevator | 3 | Play area | 7 |
| Stairs | 4 | On grounds | 8 |
| Other | 92 | (DESCRIBE) | _____ |

| | |
|------------------------|----|
| Near development | 9 |
| Elsewhere in this city | 10 |
| Outside of this city | 11 |

g. Value \$ _____ D.K. Value 94 N.A. 91

h. Yes 1 No 2 N.A. 91

i. Yes 1 No 2

| | |
|--|----------|
| Nothing could be done/Lack of proof | 1 |
| Didn't think it was important enough | 2 |
| Police wouldn't want to be bothered | 3 |
| Inconvenient, didn't want to take time | 4 |
| Too private and personal to report | 5 |
| Did not want to get involved | 6 |
| Afraid of getting hurt/Reprisal | 7 |
| Reported it to someone else | 8 |
| Other reason (SPECIFY) | 92 _____ |

k. Yes 1 No 2 N.A. 91

l. Yes 1 No 2

m. Number _____

n. (More) (More) Equal
Male(s) 1 Female(s) 2 Number 3

o. Under 12 (Mostly) 1 Over 20 (Mostly) 3
13 to 20 (Mostly) 2 D. K. 94

p. White (Most) 1 Black (Most) 2
Other (SPECIFY) 92 _____

q. Yes 1 No 2 D. K. 94

r. Yes 1 No 2 D. K. 94

s. Yes 1 No 2

Could you answer some questions about this incident for me?

(COMPLETE ONE TICKET PER INCIDENT.)

Q d. What month did this crime happen?

Q e. What time did it happen?

Q f. Could you describe where it took place?
(CIRCLE ONLY ONE ANSWER.)

Q g. If anything was actually stolen, about how much was it worth when new?

Q h. Was the property returned or were you otherwise paid for your loss?

Q i. Did you or anyone else tell the police about the crime? (IF YES, SKIP TO Q k.)

Q j. Why wasn't the crime reported to the police? (CIRCLE ALL THAT APPLY.)

Q k. Were you seriously injured?

Q l. Did you see who did it? (IF NO, SKIP TO p.64.)

Q m. How many persons were there?

Q n. (IF ONLY 1) Was this person male or female?
(IF MORE THAN 1) Were there more males
or more females?

Q o. (IF ONLY 1) About how old was this person?
(IF MORE) About how old were they mostly?

Q p. (IF ONLY 1) Was the person white, black,
other?
(IF MORE) Were most of them white, black,
other?

Q q. Did you recognize (this/any of the)
person(s)? (IF NO, SKIP TO p. 64 .)

Q r. Does (this person/any of them) live in
this development?

Q s. Does (this person/any of them) live in
this apartment?

(IF THERE ARE MORE INCIDENTS OF THE SAME TYPE)

Now I'd like to ask you about the other crime like this one.

(ASK Q d to Q s.)

(IF THERE ARE NO ADDITIONAL INCIDENTS OF THIS TYPE, RETURN TO
QUESTIONS ON PAGE 62 .)

Q 10. HOW MANY INCIDENTS DID RESPONDENT REPORT TO YOU?

TOTAL NUMBER _____

(THIS IS THE TOTAL NUMBER OF INCIDENT TICKETS FILLED OUT)

In order to analyze all the information from all the questionnaires, we need some background information.

R 1. Have you ever lived in a single-family house?

| | |
|-----|----|
| Yes | No |
| 1 | 2 |

- R 2. I'd like to talk a little about groups or organizations you may belong to. I'm going to read a list of different kinds of groups. Could you tell me whether you belong to any of them.

Do you belong to a PTA?
(READ EACH KIND OF GROUP)

- R 3. (FOR EACH YES) Could you look at card 43. How often do you attend meetings?
(WRITE NUMBER OF RESPONSE ON CHART BELOW)

(CARD 43)

| | |
|-----------------------|---|
| More than once a week | 7 |
| About once a week | 6 |
| A few times a month | 5 |
| About once a month | 4 |
| A few times a year | 3 |
| About once a year | 2 |
| Never | 1 |

- R 4. (FOR EACH YES TO R 2) Is this group or organization within walking distance?
(CIRCLE ANSWER ON CHART BELOW)

| | R 2 | R 3 Meetings | R 4 Location |
|--|------------|-----------------|-----------------|
| a PTA (Parent Teacher Association) | Yes 1 No 2 | | Yes 1 No 2 |
| a political group | Yes 1 No 2 | | Yes 1 No 2 |
| a church or religious group | Yes 1 No 2 | | Yes 1 No 2 |
| a civic group or citizens' advisory committee | Yes 1 No 2 | | Yes 1 No 2 |
| a volunteer or charity group | Yes 1 No 2 | | Yes 1 No 2 |
| a sports club, hobby group, fraternity or sorority | Yes 1 No 2 | | Yes 1 No 2 |
| a union or professional association | Yes 1 No 2 | | Yes 1 No 2 |
| Do you belong to any other organization? (SPECIFY) | Yes 1 No 2 | | Yes 1 No 2 |
| _____ | | | |
| _____ | | | |

- R 5. Could you tell me who lives in this apartment including yourself?
(RESPONDENT 1ST, THEN OLDEST TO YOUNGEST)

| Name | Relationship to respondent | Sex | Age (last birthday) |
|------|-------------------------------|-----|------------------------|
| 1. | Respondent | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |

- R 6. Is there anyone who usually lives here who is away right now?
(AT SCHOOL, ARMY, VACATION, ETC.)

| | |
|-----|----|
| Yes | No |
| 1 | 2 |

IF YES, RECORD ABOVE AND WRITE "Away"
NEXT TO HIS/HER NAME.

- R 7. Please turn to card 44. Would you tell me the letter on this card which best represents your total family income in 1975 before taxes? Please include salary, welfare, social security, interest from savings, and any other income received by all those people in this household who are related to you.
(IF R IS UNCERTAIN, ASK "What would be your best guess?")

(CARD 44)

| | |
|--------------------------------|----|
| A. Under \$3,000 a year | 1 |
| B. \$3,000 to \$3,999 a year | 2 |
| C. \$4,000 to \$4,999 a year | 3 |
| D. \$5,000 to \$5,999 a year | 4 |
| E. \$6,000 to \$7,999 a year | 5 |
| F. \$8,000 to \$9,999 a year | 6 |
| G. \$10,000 to \$11,999 a year | 7 |
| H. \$12,000 to \$14,999 a year | 8 |
| I. \$15,000 to \$19,999 a year | 9 |
| J. \$20,000 to \$24,999 a year | 10 |
| K. \$25,000 to \$29,999 a year | 11 |
| L. \$30,000 to \$34,999 a year | 12 |
| M. \$35,000 and over a year | 13 |
| N. Refused | 97 |
| O. Don't know | 94 |

- R 8. Please turn to card 45. What is the major source of income for this household? (ACCEPT ONLY ONE ANSWER)

(CARD 45)

| | |
|--|----|
| Wages or salaries | 1 |
| Unemployment compensation | 2 |
| Social security or retirement benefits | 3 |
| Welfare payments | 4 |
| Alimony or child support | 5 |
| Other (SPECIFY) _____ | 92 |
| _____ | |
| _____ | |
| Refused | 97 |
| Don't know | 94 |

R 9. What is the highest grade of school you have completed?

| | | | | | | | | | |
|-------------------|---|----|----|----|----|---|---|---|---|
| Elementary School | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| High School | 9 | 10 | 11 | 12 | | | | | |
| College | 1 | 2 | 3 | 4 | 5+ | | | | |

R 10. (IF HUSBAND OR WIFE IS LIVING THERE)
What is the highest grade your husband (wife) has completed in school?

| | | | | | | | | | |
|-------------------|---|----|----|----|----|---|---|---|---|
| Elementary School | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| High School | 9 | 10 | 11 | 12 | | | | | |
| College | 1 | 2 | 3 | 4 | 5+ | | | | |

R 11. Please turn to card 46. Which of the groups listed on this card do you feel you belong to?
(MORE THAN ONE ANSWER CAN BE SELECTED)

(CARD 46)

| | |
|---|----|
| Black | 1 |
| White | 2 |
| Hispanic | 3 |
| Puerto Rican | 4 |
| Chicano | 5 |
| Mexican-American | 6 |
| Asian | 7 |
| American Indian | 8 |
| Other (SPECIFY IF VOLUNTEERED) _____ | 92 |
| _____ | |
| _____ | |
| Refused | 97 |
| Don't know | 94 |

APPENDIX B
SUPPLEMENTARY TABLES FOR CHAPTER 4

Table B4.1

Formulas used to Compute Indices
for Measuring Community Activities
and Sentiments

| Name of Index | Formula |
|----------------------------------|--|
| Attachment | $A13x7 + B1x8 + B3x6 + (6 - C5)x7$ |
| Friendship-kinship ¹ | $ROUND (10x(F8 + F9 \div 10x8))$ |
| Acquaintance ¹ | $ROUND (10x(F1 \div 7 + F2 \div 5 + F3 \div 10))$ |
| Cohesion ¹ | $ROUND (10x(G1 \div 5 + G7 \div 5 + (4 - G9) \div 3))$ |
| Responsibility | $L1x7 + L3x6 + L8x5$ |
| Use of shared space ² | $EXTUSE x5 + INTUSE x(5 - EXTUSE)$ |

Note: When an index is composed of items that have different ranges of values, each item is divided by its range of values so that an item with a wider range of values will not contribute to the index more heavily than an item which takes a smaller number of values (Nie et al, 1975).

Note: Each item in an index (except for use of shared space) is multiplied by the weight which that item produced on the relevant factor in the factor matrix (See Table 4.1 in Chapter 4)

¹The word "round" and multiplying by 10 in the formula are ways of eliminating decimal values in the index (Nie et al, 1975).

²The formula for use of shared space contains the names of two derived variables, EXTUSE and INTUSE. EXTUSE was derived by adding up answers to the item concerning the use of outdoor space (T10); and INTUSE was derived by adding up answers to the item about the use of shared indoor space (J12).

Table B4.2

Zero-order Correlations between Site
 Attributes that have Intercorrelations > .60
 (N = 43 sites)

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
|-------------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| (1) Building type | 1.00 | | | | | | | | | | |
| (2) Typical no. of apts/floor* | .82 | 1.00 | | | | | | | | | |
| (3) No. of facilities | .43 | .54 | 1.00 | | | | | | | | |
| (4) Tenants' association* | .20 | .31 | .64 | 1.00 | | | | | | | |
| (5) Percent AFDC* | .07 | .07 | .03 | -.10 | 1.00 | | | | | | |
| (6) Percent with income \$5500 + | .13 | -.04 | .22 | .46 | -.71 | 1.00 | | | | | |
| (7) Percent aged 20-35* | .04 | .06 | -.19 | -.27 | .04 | .03 | 1.00 | | | | |
| (8) Percent aged 50 + | .16 | .09 | .17 | .10 | -.24 | -.05 | -.71 | 1.00 | | | |
| (9) Percent with minors* | -.21 | -.03 | -.05 | -.04 | .42 | .01 | .31 | -.65 | 1.00 | | |
| (10) Percent black | .17 | .18 | .12 | .06 | .34 | -.25 | .01 | -.23 | .19 | 1.00 | |
| (11) Racial homogeneity* | .13 | .15 | .05 | -.19 | .21 | -.34 | .12 | -.04 | .01 | .66 | 1.00 |

*Variables included in the regression analysis conducted at site-level.

Table B4.3

Zero-order Correlations between all Site
Attributes Included in Regression Analysis
(N = 43 sites)

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) |
|----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| (1) Typical no. of apts/floor | 1.00 | | | | | | | | | | | | |
| (2) Percent AFDC | .07 | 1.00 | | | | | | | | | | | |
| (3) Percent with minors | -.03 | .42 | 1.00 | | | | | | | | | | |
| (4) Percent aged 20 to 35 | .06 | .04 | .31 | 1.00 | | | | | | | | | |
| (5) Cooperative | -.15 | -.14 | -.03 | -.29 | 1.00 | | | | | | | | |
| (6) Tenants' Assn. | .31 | -.10 | -.04 | -.27 | .27 | 1.00 | | | | | | | |
| (7) Turnover rate | .27 | .12 | .16 | .41 | -.29 | -.43 | 1.00 | | | | | | |
| (8) Victimization rate | -.26 | .44 | .34 | .19 | .28 | -.21 | .28 | 1.00 | | | | | |
| (9) Age of site | .01 | .12 | -.07 | -.03 | -.21 | -.09 | .05 | .09 | 1.00 | | | | |
| (10) Racial homogeneity | .15 | .21 | .01 | .12 | -.43 | -.19 | .15 | -.12 | .10 | 1.00 | | | |
| (11) Family homogeneity | -.31 | .13 | 0 | .37 | -.24 | -.29 | .05 | .34 | .13 | .09 | 1.00 | | |
| (12) Economic homogeneity | .06 | .40 | .26 | .11 | -.08 | -.05 | .10 | .22 | 0 | -.26 | 0 | 1.00 | |
| (13) Age homogeneity | -.09 | .06 | .11 | .22 | -.06 | -.09 | .28 | 0 | .40 | -.01 | .06 | .15 | 1.00 |

APPENDIX C
SUPPLEMENTARY TABLES FOR CHAPTERS 5 AND 6

Table C5.1

Existence of a Tenants' Association¹ as
 Predicted by Site Characteristics¹
 (Original Model)

| Site Characteristics | Tenants' Association | |
|------------------------|----------------------|-------|
| | r^2 | p^3 |
| No. of apts. per floor | .31 | .39* |
| Percent AFDC | -.10 | -.07 |
| Percent with minors | -.04 | .10 |
| Percent aged 20-35 | -.27 | -.25 |
| Racial homogeneity | -.19 | -.15 |
| Economic homogeneity | -.05 | -.07 |
| Family homogeneity | -.29 | -.01 |
| Age homogeneity | -.09 | .03 |
| Cooperative | .27 | .16 |
| Age of site | -.08 | -.04 |
| | $R^2 = .04$ | |

¹The site characteristics and intervening variables included in this and subsequent tables in this appendix are those that were postulated to have significant effects on the variable of interest in the original, unrevised model.

²This is the zero-order correlation.

³This is the path coefficient, or the standardized partial regression coefficient (beta weight) when all the predictor variables are included in the regression equation.

*The F ratio for this path coefficient is significant at $p < .05$.

Table C5.2

Turnover Rate and Victimization Rate as
Predicted by Site Characteristics and
Intervening Variable (Original Model)

| I Site Characteristics | Turnover Rate | | Victimization Rate | |
|--------------------------------|---------------|------------------|--------------------|------|
| | r | p | r | p |
| No. of apts per floor | .27 | .43* | -.26 | -.18 |
| Percent AFDC | .12 | .04 ₅ | .44 | .41* |
| Percent with minors | .16 | .06 | .34 | .16 |
| Percent aged 20-35 | .41 | .17 | .19 | .10 |
| Racial homogeneity | .15 | -.09 | -.12 | -.26 |
| Economic homogeneity | .10 | -.08 | .22 | -.04 |
| Family homogeneity | .05 | -.04 | .34 | .18 |
| Age homogeneity | .28 | .28 | 0 | -.13 |
| Cooperative | -.29 | -.10 | -.05 | -.03 |
| Age of site | .03 | -.12* | .07 | .09 |
| II Intervening Variable | | | | |
| Tenants' association | -.43 | -.50 | -.21 | -.07 |
| | $R^2=.31$ | | $R^2=.20$ | |

Table C5.3

Levels of Friendship-kinship and Acquaintance
as Predicted by Site Characteristics
and Intervening Variables (Original Model)

| I Site Characteristics | Friendship-kinship | | Acquaintance | |
|---------------------------------|--------------------|------|--------------|------|
| | r | p | r | p |
| No. of apts. per floor | 0 | .10 | -.10 | .12 |
| Percent AFDC | .34 | .43* | -.10 | -.10 |
| Percent with minors | .19 | .07 | .04 | .16 |
| Percent aged 20-35 | -.06 | .15 | -.23 | -.01 |
| Racial homogeneity | .08 | .11 | -.20 | .04 |
| Economic homogeneity | -.16 | -.29 | -.04 | .06 |
| Family homogeneity | .01 | .01 | -.12 | .02 |
| Age homogeneity | -.10 | -.07 | .09 | .01 |
| Cooperative | .34 | .43* | .42 | .36* |
| Age of site | .07 | .15 | .24 | .36* |
| II Intervening Variables | | | | |
| Turnover rate | -.23 | -.23 | -.40 | -.14 |
| Victimization rate | .15 | .11 | -.12 | -.08 |
| Tenants' association | .19 | .07 | .42 | .33 |
| | $R^2 = .21$ | | $R^2 = .22$ | |

Table C5.4

Level of Residents' Use of Space as Predicted
by Site Characteristics and
Intervening Variables (Original Model)

| I Site Characteristics | Use of Space | |
|---------------------------------|--------------|------|
| | r | p |
| No. of apts. per floor | -.33 | -.32 |
| Percent AFDC | .05 | -.09 |
| Percent with minors | .11 | .02 |
| Percent aged 20-35 | .28 | .24 |
| Racial homogeneity | .07 | .15 |
| Economic homogeneity | -.04 | .01 |
| Family homogeneity | .34 | .09 |
| Age homogeneity | .08 | -.19 |
| Cooperative | -.01 | .23 |
| Age of site | .28 | .37* |
| <u>II Intervening Variables</u> | | |
| Turnover rate | .20 | .21 |
| Victimization rate | .37 | .19 |
| Tenants' association | -.33 | -.05 |
| | $R^2 = .16$ | |

Table C5.5

Level of Experience in Solving a Common
Problem as Predicted by Site Characteristics
and Intervening Variables (Original Model)

| I Site Characteristics | Common Problem | |
|--------------------------|----------------|------|
| | r | p |
| No. of apts. per floor | .21 | .12 |
| Percent AFDC | -.01 | -.11 |
| Percent with minors | .02 | .01 |
| Percent aged 20-35 | -.23 | 0 |
| Racial homogeneity | -.08 | .21 |
| Economic homogeneity | -.04 | .06 |
| Family homogeneity | -.16 | .03 |
| Age homogeneity | -.27 | -.12 |
| Cooperative | .30 | .16 |
| Age of Site | | |
| <hr/> | | |
| II Intervening Variables | | |
| Turnover rate | -.40 | -.17 |
| Victimization rate | .04 | .32* |
| Tenants' association | .77 | .71* |
| | $R^2 = .60$ | |

Table C6.1

Level of Safety and Quality of Maintenance as
Predicted by Site Characteristics and
Intervening Variables (Original Model)

| I Site characteristics | Safety | | Maintenance | |
|---------------------------------|-------------|-------|-------------|------|
| | r | p | r | p |
| No. of apts. per floor | -.36 | -.48* | -.25 | -.29 |
| Percent AFDC | -.71 | -.86* | -.61 | -.43 |
| Percent with minors | -.29 | .06 | -.32 | -.14 |
| Percent aged 20-35 | .01 | -.07 | -.08 | .16 |
| Racial homogeneity | -.11 | -.03 | -.09 | .17 |
| Economic homogeneity | -.35 | .16 | -.41 | -.07 |
| Family homogeneity | .12 | .22 | -.14 | -.05 |
| Age homogeneity | .01 | -.02 | 0 | .02 |
| Cooperative | .12 | 0 | .46 | .35* |
| Age of Site | -.11 | .03 | -.16 | -.10 |
| II Intervening Variables | | | | |
| Turnover rate | -.15 | .18 | -.24 | .08 |
| Victimization rate | -.37 | -.32 | -.43 | -.20 |
| Tenants' association | -.02 | .38 | .10 | .07 |
| Friendship-kinship | -.16 | .53 | .08 | .14 |
| Acquaintance | .06 | -.41 | .32 | .16 |
| Use of space | .03 | 0 | .04 | -.08 |
| Common problem | -.12 | -.26 | .04 | -.12 |
| | $R^2 = .55$ | | $R^2 = .47$ | |

Table C6.2

Level of Community Attachment as Predicted by Site
Characteristics and Intervening Variables (Original Model)

| I Site Characteristics | Attachment | |
|---------------------------------|------------|-------------|
| | r | p |
| No. of apts. per floor | -.57 | -.40* |
| Percent AFDC | -.57 | .11 |
| Percent with minors | -.32 | -.18 |
| Percent aged 20-35 | -.24 | -.01 |
| Racial homogeneity | -.31 | -.09 |
| Economic homogeneity | -.22 | -.08 |
| Family homogeneity | -.03 | -.10 |
| Age homogeneity | .12 | .13 |
| Cooperative | .37 | -.04 |
| Age of site | -.07 | -.12 |
| <u>II Intervening Variables</u> | | |
| Tenants' association | .14 | -.08 |
| Turnover rate | -.38 | -.01 |
| Victimization rate | -.25 | .05 |
| Friendship-kinship | -.02 | -.33 |
| Acquaintance | .43 | .52* |
| Use of space | .11 | -.06 |
| Common problem | .08 | .17 |
| Safety | .68 | .37* |
| Maintenance | .68 | .20 |
| | | $R^2 = .80$ |

Table C6.3

Level of Community Responsibility as Predicted by
Site Characteristics and Intervening Variables
(Original Model)

| I Site Characteristics | Responsibility | |
|---------------------------------|----------------|-------------|
| | r | p |
| No. of apts. per floor | -.20 | .09 |
| Percent AFDC | -.51 | -.13 |
| Percent with minors | -.19 | -.03 |
| Percent aged 20-35 | -.18 | -.12 |
| Racial homogeneity | -.17 | -.07 |
| Economic homogeneity | -.27 | -.14 |
| Family homogeneity | -.15 | -.17 |
| Age homogeneity | .15 | .26 |
| Cooperative | .23 | -.19 |
| Age of site | .06 | -.18 |
| II Intervening Variables | | |
| Tenants' association | .23 | -.06 |
| Turnover rate | -.26 | -.14 |
| Victimization rate | -.27 | .07 |
| Friendship-kinship | .19 | -.09 |
| Acquaintance | .58 | .49 |
| Use of space | .26 | .25 |
| Common problem | .15 | .07 |
| Safety | -.49 | -.32 |
| Maintenance | .51 | .05 |
| | | $R^2 = .39$ |

Table C6.4

Level of Perceived Influence over Management as Predicted by
Site Characteristics and Intervening Variables (Original Model)

| I Site Characteristics | Perceived Influence | |
|---------------------------------|---------------------|-------------|
| | r | P |
| No. of apts. per floor | .28 | .42 |
| Percent AFDC | -.04 | -.13 |
| Percent with minors | -.03 | .08 |
| Percent aged 20-35 | -.12 | 0 |
| Racial homogeneity | .12 | .32 |
| Economic homogeneity | -.03 | .31 |
| Family homogeneity | -.15 | -.02 |
| Age homogeneity | -.01 | .01 |
| Cooperative | .24 | .18 |
| Age of site | .26 | .41* |
| II Intervening Variables | | |
| Tenants' association | .50 | .38 |
| Turnover rate | -.34 | -.33 |
| Victimization rate | -.15 | .25 |
| Friendship-kinship | .35 | .29 |
| Acquaintance | .39 | -.25 |
| Use of space | -.07 | .03 |
| Common problem | .46 | -.02 |
| Safety | -.04 | -.20 |
| Maintenance | .21 | .33 |
| | | $R^2 = .35$ |

BIBLIOGRAPHY

- Althausser, R. "Multicollinearity and non-additive regression models." In H. M. Blalock (Ed.), Causal Models in the Social Sciences. Chicago: Aldine, 1971.
- Axelrod, M. Urban structure and social participation. American Sociological Review, 1956, 27, 13-18.
- Babbie, E. R. Survey research methods. Belmont, Ca.: Wadsworth, 1973.
- Baum, A. and Valins, S. Architecture and social behavior. Hillsdale, N. J.: Lawrence Erlbaum, 1977.
- Becker, F. Housing messages. Stroudsburg, Penn.: Dowden, Hutchinson, and Ross, 1977.
- Becker, F. D. Design for living: The residents' view of multi-family housing. Unpublished manuscript. Ithaca, N. Y.: Center for Urban Development Research, 1975.
- Bell, W. and Force, M. T. Urban neighborhood types and participation in informal relations. American Sociological Review, 1956, 21, 25-34.
- Bell, W. The city, the suburb, and a theory of social choice. In S. Greer, D. McElrath, D. W. Minar and P. Orleans (Eds.), The new urbanization. New York: St. Martin's Press, 1968.
- Blalock, H. M. Causal inferences in nonexperimental research. New York: Norton Library, 1961.
- Blalock, H. M. Causal Models in the social sciences. Chicago: Aldine Press, 1971.
- Blalock, H. M. "Correlated independent variables: The problem of multicollinearity. Social Forces, 42: 233,-237, 1963.
- Blalock, H. M. Social Statistics. New York: McGraw Hill, 1960.
- Boyd, D., Morris, D., and Peel, T. S. Selected social characteristics and multi-family living environment. Milieu, 1965, 1. Cited by W. H. Ittelson, H. M. Proshansky, L. G. Rivlin, and G. H. Winkel, An introduction to environmental psychology. New York: Holt, Rinehart and Winstons, 1974, p. 365.
- Boyle, R. P. Path analysis and ordinal data. American Journal of Sociology, 1970, 75, 4, 461-480.

- Broady, M. Social theory in architectural design. In R. Gutman (Ed.), People and buildings. New York: Basic Books, 1972.
- Brower, S. N. and Williamson, P. Outdoor recreation as a function of the urban housing environment. Environment and Behavior, 1974, 6, 295-346.
- Caplow, T. and Forman, R. Neighborhood interaction in a homogeneous community. American Sociological Review, 1950, 15, 357-366.
- Chermayeff, S. and Alexander, C. Community and privacy. Garden City, N. Y.: Doubleday, 1963.
- Coleman, J. S. Community conflict. Glencoe, Ill.: The Free Press, 1957.
- Cooper, C. and Hackett, P. Analysis of the design process at two moderate-income housing developments. Berkeley: Institute of Urban and Regional Development, 1968. Working Paper No. 80.
- Cooper, C. Residents' attitudes toward the environment at St. Francis Square, San Francisco. Berkeley: Institute of Urban and Regional Development, 1970. Working Paper No. 126.
- Cooper, C., Day, N., and Levine, B. Resident dissatisfaction in multi-family housing. Berkeley: Institute of Urban and Regional Development, 1972. Working Paper No. 160.
- Cooper, C. Easter Hill Village. New York: The Free Press, 1975.
- Deutsch, M. and Collins, M. E. Interracial housing: A psychological evaluation of a social experiment. Minneapolis: University of Minnesota Press, 1951.
- Downs, A. Opening up the suburbs. New Haven: Yale University Press, 1973.
- Duncan, O. D. Path analysis: Sociological examples. American Journal of Sociology, 1966, 72, 1, 1-16.
- Effrat, M. P. Approaches to community: Conflicts and complementarities. In M. P. Effrat (Ed.), The community: Approaches and Applications. New York: The Free Press, 1974.
- Empey, L. T. and Lubeck, R. L. Explaining delinquency. Lexington, Mass: Heath Lexington Books, 1971.

- Feagin, J. R. Community disorganization: Some critical notes. In M. P. Effrat (Ed.), The community: Approaches and applications. New York: The Free Press, 1974.
- Festinger, L., Schacter, S., and Back, K. Social pressure in informal groups. New York: Harper, 1950.
- Festinger, L. Architecture and group membership. Journal of Social Issues, 1951, 7, 152-163.
- Franck, K. A. Environmental psychology: A call for discipline and imagination. Paper presented at the New England Psychological Association, Clarke University, November 13, 1976.
- Fried, M. and Gleicher, P. Sources of residential satisfaction in an urban slum. Journal of the American Institute of Planners, 1961, 27, 305-315.
- Fried, M. Grieving for a-lost-home. In L. J. Duhl (Ed.), The urban condition. New York: Basic Books, 1963.
- Gans, H. J. The urban villagers. New York: The Free Press, 1959.
- Gans, H. J. The Levittowners. New York: Pantheon Press, 1967.
- Gans, H. J. People and plans. New York: Basic Books, 1968.
- Gillis, A. R. High-rise housing and psychological strain. Journal of Health and Social Behavior, 1977, 18, 418-431.
- Ginsberg, Y. Jews in a changing neighborhood. New York: The Free Press, 1975.
- Glaser, B. and Strauss, A. The discovery of grounded theory. Chicago: Aldine, 1967.
- Greer, S. Urbanism reconsidered: A comparative study of local areas in a metropolis. American Sociological Review, 1956, 21, 19-25.
- Greer, S. The social structure and political process of suburbia. American Sociological Review, 1960, 25, 514-526.
- Greer, S. Neighborhood. In D. Sills (Ed.), International encyclopedia of the social sciences. Vol. 2. New York: Macmillan and the Free Press, 1968.
- Gutman, R. Site planning and social behavior. Journal of Social Issues, 1966, 22, 103-115.
- Hillery, G. A. Definitions of community: Areas of agreement. Rural Sociology, 1955, 20, 111-123.

- Hirschi, T. and Selvin, H. C. Principles of Survey Analysis. New York: The Free Press, 1967.
- Homans, G. C. The human group. New York: Harcourt Brace, 1950.
- Hunter, A. Symbolic communities. Chicago: University of Chicago Press, 1974.
- Hunter, A. The loss of community: An empirical test through replication. American Sociological Review, 1975, 40, 537-552.
- Hunter, A. Reply to Luloff and Wilkinson. American Sociological Review, 1977, 42, 5, 828-829.
- Ittelson, W. H., Proshansky, H. M., Rivlin, L. G., and Winkel, G. H. An introduction to environmental psychology. New York: Holt, Rinehart and Winston, 1974.
- Jacobs, J. Death and life of great American cities. New York: Random House, 1961.
- Jahoda, M. and West, P. Race relations in public housing. Journal of Social Issues, 1951, 7, 132-139.
- Janowitz, M. J. The community press in an urban setting. Chicago: University of Chicago Press, 1952.
- Jencks, C. Modern movements in architecture. Garden City, N. Y.: Doubleday, 1973.
- Kanter, R. Commitment and community: Communes and utopias in sociological perspective. Cambridge, Mass: Harvard University Press, 1972.
- Kasarda, J. and Janowitz, M. Community attachment in mass society. American Sociological Review, 1974, 39, 328-339.
- Keller, S. Social class in physical planning. International Social Science Journal, 1966, 18, 494-512.
- Keller S. Neighborhood concepts in sociological perspective. In J. Gabree (Ed.), Surviving the city. New York: Ballantine Books, 1973.
- Kerlinger, F. N. and Pedhazur, E. J. Multiple regression in behavioral research. New York: Holt, Rinehart, and Winston, 1973.
- Kim, J. and Kohout, F. J. Multiple regression analysis. In N. Nie et al (Eds.), Statistical package for the social sciences. New York: McGraw Hill, 1975.
- Kim, J. and Kohout, F. J. Special topics in general linear models. In N. Nie et al (Eds.), Statistical package for the social sciences. New York: McGraw Hill, 1975.

- Kohn, I., Franck, K., and Fox, S. Defensible space modifications in row house communities. Unpublished manuscript. Institute for Community Design Analysis, 1975.
- Kornhauser, W. Mass society. In D. Sills (Ed.), International encyclopedia of the social sciences, Vol. 10, New York: Macmillan and the Free Press, 1968.
- Land, K. C. Principles of path analysis. In E. F. Borgatta (Ed.), Sociological Methodology 1969. San Francisco: Jossey-Bass, 1969.
- Langer, S. Feeling and form. New York: Charles Scribner, 1953.
- Lawton, M. P. and Nahemow, L. Ecology and the aging process. In C. Eisdorfer and M. P. Lawton (Eds.), The psychology of adult development and aging. Washington, D. C.: APA, 1973.
- Litwak, E. Voluntary associations and neighborhood cohesion. In R. Gutman and D. Popenoe (Eds.), Neighborhood, city and metropolis. New York: Random House, 1970.
- Luloff, A. E. and Wilkinson, K. P. Is community alive and well in the inner city? American Sociological Review, 1977, 42, 5, 828-829.
- Maxwell, A. E. and Humphreys, L. G. Factor analysis. In D. L. Sills (Ed.), International encyclopedia of the social sciences. Vol. 5. New York: Macmillan and the Free Press, 1968.
- McCarthy, D. and Saegert, S. Residential density, social control, and social withdrawal. New York: Environmental Psychology Program, City University of New York, 1976.
- *
- McFall, T. P. Racially and economically integrated housing. Unpublished manuscript, Metropolitan Council, St. Paul, Minnesota, 1974.
- Merton, R. K. The social psychology of housing. In W. Dennis (Ed.), Current trends in social psychology. Pittsburgh: University of Pittsburgh Press, 1948.
- Michelson, W. H. Man and his urban environment. Reading, Mass: Addison-Wesley, 1970.
- Michelson, W. H. The reconciliation of subjective and objective data on physical environment in the community. In M. P. Effrat (Ed.), The community: Approaches and applications. New York: The Free Press, 1974.
- Milgram, S. The experience of living in cities. Science, 1970, 67, 1461-1468.
- Moore, W. The vertical ghetto. New York: Random House, 1969.
- *McCarthy, D. Effects of tenant population size on low-income public housing residents. City University of New York: Ph.D. dissertation, 1978.

- Newman, O. (Ed.) CIAM '59 in Oterlo. Stuttgart: Karl Kramer Verlag, 1961.
- Newman, O. Defensible space. New York: Macmillan, 1972.
- Newman, O. Architectural design for crime prevention. Washington: Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice, 1973.
- Newman, O. Community of interest. New York: Doubleday, in press.
- Newman, O. Design guidelines for creating defensible space. Washington: Law Enforcement Assistance Administration, National Institute of Law Enforcement and Criminal Justice, 1976.
- Newman, O., Franck, K. A.: Nasatir, E. D., and Bryan, B. Crime and instability in federally-assisted housing. Unpublished manuscript. New York: Institute for Community Design Analysis, 1978.
- Nie, N., Hull, C. H., Jenkins, J. G., Steinbrenner, K. and Bent, P. H. Statistical package for the social sciences. New York: McGraw Hill, 1975.
- Nisbet, R. The quest for community. New York: Oxford University Press, 1953.
- Nisbet, R. Moral values and community. In R. Gutman and D. Popenoe (Eds.), Neighborhood, city, and metropolis. New York: Random House, 1970.
- Nohara, S. Social context and neighborliness: The Negro in St. Louis. In S. Greer, D. McElrath, D. W. Minar, and P. Orleans (Eds.), The new urbanization. New York: St. Martin's Press, 1968.
- Norberg-Schulz, C. Existence, space and architecture. New York: Praeger, 1971.
- Park, R. Human communities. Glencoe, Ill.: The Free Press, 1952.
- Rainwater, L. Fear and house as haven in the lower class. Journal of American Institute of Planners, 1966, 32, 23-30.
- Reiss, A. J. The sociological study of communities. In R. Gutman and D. Popenoe (Eds.), Neighborhood, city and metropolis. New York: Random House, 1970.
- Rosenberg, M. The logic of survey analysis. New York: Basic Books, 1968.
- Ross, H. L. The local community: A survey approach. In S. Greer and A. L. Greer (Eds.), Neighborhood and ghetto. New York: Basic Books, 1974.

- Schulz, D. A. Coming up black: Patterns of ghetto socialization. New Jersey: Prentice Hall, 1969.
- Smithson, A. and Smithson, P. An urban project. In T. Danatt (Ed.), Architects' year book 5. London: Elek Books Ltd., 1953.
- Smithson, A. and Smithson, P. Criteria for mass housing. Forum, 1960, 16-17.
- Smithson, A. (Ed.) Team 10 Primer. Cambridge: The MIT Press, 1968.
- Stein, M. The eclipse of community. Princeton: Princeton University Press, 1960.
- Stephan, F. F. and McCarthy, P. J. Sampling opinions: An analysis of survey procedures. New York: John Wiley and Sons, 1958.
- Suttles, G. D. The social order of the slum. Chicago: University of Chicago Press, 1968.
- Suttles, G. D. The social construction of communities. Chicago: University of Chicago Press, 1972.
- Tilly, C. Do communities act? In M. P. Effrat (Ed.), The community: Approaches and applications. New York: The Free Press, 1974.
- Van Eyck, A. The medicine of reciprocity tentatively illustrated. Forum, 1961, 6, 237-391
- Van Eyck, A. Steps towards a configurative discipline. Forum, 1962, 81-94.
- Vidich, A. J. and Bensman, J. Small town in mass society. Princeton: Princeton University Press, 1958.
- Webber, M. The urban place and the nonplace urban realm. In M. Webber (Ed.), Explorations into urban structure. Philadelphia: University of Pennsylvania Press, 1964.
- Webber, M. Order in diversity: Community without propinquity. In R. Gutman and D. Popenoe (Eds.), Neighborhood, city and metropolis. New York: Random House, 1970.
- Wilner, D. M., Walkley, R., and Cook, S. W. Human Relations in interracial housing: A study of the contact hypothesis. Minneapolis: University of Minnesota Press, 1955.

Wirth, L. Urbanism as a way of life. In P. Hatt and A. Reiss (Eds.), Cities and society. New York: The Free Press, 1957.

Yancey, W. L. Architecture, interaction, and social control: The case of a large-scale public housing project. In J. Helmer and N. A. Eddington (Eds.), Urbanman. New York: The Free Press, 1973.

Zald, M. Sociology and community organization practice. In M. Zald (Ed.), Organizing for community welfare, Chicago: Quadrangle, 1967. Cited by A. Hunter, Symbolic communities. Chicago: University of Chicago Press, 1974.

Zeisel, J. and Griffin, M. Charlesview Housing. Cambridge, Mass: Architecture Research Office, Graduate School of Design, 1975.

Zimmer, B. G. and Hawley, A. H. The significance of membership in associations. American Journal of Sociology, 1959, 65, 196-201.