

THE CONCEPT AND MEASUREMENT
OF NEIGHBORHOOD QUALITY

A report prepared for the
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Office of Policy Development and Research

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CHAPTER I
INTRODUCTION

The purpose of this monograph is twofold. First, it examines the state of existing knowledge on the concept and measurement of neighborhood quality. Second, it considers the validity of that knowledge, and the degree to which it can be useful in formulating public policy. The format for this examination is a critical review of the literature on neighborhoods. Such a review necessitates our considering definitions for the terms "neighborhood" and "neighborhood quality;" synthesizing a scattered array of knowledge regarding the nature of neighborhood quality (i.e., its causes and consequences for individual and social well-being); and assessing the strengths and weaknesses of various methodological strategies used in examining neighborhoods.

Residential neighborhoods have been a popular topic of research, as evidenced by an extensive literature produced over the past 50 years. The idea of neighborhood quality, however, is a fairly recent focus of interest, stimulated in part by increasing citizen concern with the current state of residential environments and by governmental attempts to create viable neighborhood policies. Even a cursory scan of daily newspapers will generally reveal some news or feature articles about the problems of neighborhoods. A common theme in such articles is that many American neighborhoods--particularly those in urban areas--are in a state of decline, subject to forces over which the individual resident has little or no control.

In this vein popular journalism seems to reflect how the American public views its neighborhoods. A recent national Gallup poll (1978), for example showed that over the previous five years, ratings of

neighborhood quality by the general public had significantly declined. In spite of their concern about neighborhood conditions, however, many Americans nevertheless seem to feel attached to their neighborhoods and, if conditions changed, would like to stay. While over one-third of those polled stated that they would like to move out of their current neighborhood, three-quarters of these people would stay if improvements were made. Moreover, a vast majority of people who wanted improvements said they would be willing to contribute their own time toward making them. Finally, when asked about specific problems, citizens mentioned such conditions as increasing crime, poor maintenance, and increased housing costs.

While it is the concrete conditions of neighborhoods that hold the general public's attention, such conditions are often placed in a wider context by policy analysts and urban planners as symptoms of more general problems, such as whether cities can continue to attract a white, middle-class population, whether racial integration within residential neighborhoods is an attainable goal, whether certain forms of urban renewal or rehabilitation are more appropriate than others, or whether citizen conservation serves all citizens equally well. Thus, many problems that are manifested in neighborhoods actually bear on community-wide concerns.

Unfortunately, neither the level of public interest in neighborhood quality nor the level of concern among government representatives about formulating and implementing neighborhood policies corresponds to the level of knowledge that social scientists can bring to bear on the questions of interest. In spite of extensive public concern, in spite of extensive research on neighborhoods, and in spite of the desire on the part of public servants to facilitate "good neighborhoods," neigh-

neighborhood quality remains an elusive concept and difficult to achieve.

In order to increase our ability to understand what neighborhood quality is and to plan for enhancing it, the Department of Housing and Urban Development has sponsored this systematic review of the literature with an emphasis on empirical research. In the course of this review, we expect (1) to synthesize existing knowledge in a framework that relates simultaneously to disciplinary issues in the study of neighborhoods and to public policy regarding neighborhood quality; (2) to document the conceptual and methodological problems in studying neighborhood quality; and (3) to point the way toward future policy research with respect to neighborhood quality. In simpler language, a critical review of this sort should tell us what we already know, how trustworthy and useful such knowledge is, and what more we need to know about the determinants and effects of neighborhood quality in order to further policy action.

The review has been designed to serve three audiences who might concern themselves with neighborhood phenomena and neighborhood quality. First, the review should be of interest to government policy analysts, housing officials, and policy planners at local and national levels. Second, the review should be of interest to those involved in the design and physical layout of residential areas. Finally, the review should be of interest to social researchers concerned with the dynamics of human relations in everyday settings.

A Brief Overview of Research on Neighborhoods

The topic of neighborhoods, and implicitly the idea of neighborhood quality, has long been of interest to social scientists and urban planners. Over the years, however, formal thinking and research on

neighborhoods has developed along fairly strict disciplinary lines. Sociologists, psychologists and planners have approached the study of neighborhoods using frameworks more appropriate to an intra-disciplinary rather than an interdisciplinary focus. Thus, in spite of the general recognition that the neighborhood is a complex arena in which social, psychological and environmental effects occur simultaneously and interactively, few investigators have been able to bridge disciplinary lines. Besides the disciplinary divisions, research on neighborhoods is characterized by a plethora of methodological techniques and by variability in methodological rigor.

The result of attention to disciplinary interests and of variation in technique is a wide assortment of empirical studies on neighborhoods. On the face of it, these studies do not present an integrated view of exactly what a neighborhood is, what functions the neighborhood serves, and what impact it has on its residents. In general, while much piecemeal knowledge exists about neighborhood phenomena, that knowledge is not easily integrated into an overall and coherent framework on which to base public policy.

The Sociological Research Perspective. Neighborhood phenomena were first a major focus of research as part of the post-World War I studies on urban ecology, initiated by University of Chicago sociologists (e.g., Park and Burgess, 1929; Wirth, 1925; McKenzie, 1934; Zorbaugh, 1929). Although the main thrust of the urban ecologists was to understand the development and functioning of metropolitan areas at large, the ecological perspective--with its emphasis on interrelationships among various geographic, economic, and social segments that constituted urban areas--necessarily included an interest in residential neighborhoods.

Indeed, such concepts as dominance, invasion, and succession, used by the Chicago school to explain the urban ecology, are still often found in contemporary analyses of neighborhoods.

The early urban sociologists used such techniques as ecological maps and field observation in order to classify and distinguish residential segments of the larger community. These methods enabled the researchers to document great variation in the social characteristics of neighborhoods, specifically in their dominant ethnic and racial composition. They also were able to demonstrate variability in indicators of social "disorganization" or pathologies (such as crime rates, suicide rates, illness rates), and in the nature of social relations. Indeed, by inference, the quality of a residential neighborhood was viewed as a function of its social character: better neighborhoods had a lower incidence of social pathologies and provided residents with supportive social relations.

The urban sociologists had a lasting influence on the nature of neighborhood research with respect to both the methodological techniques and the theoretical concepts that they developed and defined. Methodological, these urban ecologists strongly emphasized the collection of empirical data--existing administrative or archival data supplemented by anthropological observations--with which to describe and monitor conditions in the environment. Like much of the current social indicator research, they used either "aggregate" data or data on objective conditions (e.g., mortality rates) in order to map out the variegated and changing nature of the metropolitan area.

The urban ecologists also developed certain premises that still influence current research on neighborhoods. One of these is the impor-

tance of the neighborhood as a social unit. Even today, much of the sociological research on neighborhoods focuses primarily on some aspect of social relations such as social cohesion, social norms, social organization and/or on the social characteristics of area residents such as their occupations, their ethnic backgrounds or stage in the life-cycle. A second premise was that neighborhoods will necessarily vary with respect to their desirability and with respect to the people who are attracted there. Thus, the different residential areas of the city served the needs of different population groups. For example, a city would normally develop a "rooming house" neighborhood, a "bohemia," or a "Gold Coast," each of which was characterized by its unique sets of social relations and by different physical and economic conditions. That the development of such areas was deemed "natural" reminds us that not all people desire or fit into the same set of environmental conditions and that people often select their environments to match their personal and familial needs.

A third premise underlying the sociological perspective--and indeed, virtually all subsequent research on neighborhoods--is that the neighborhood affects the individual resident's well-being. Although the causal structure of the relationship between environmental conditions and personal outcomes was not clearly specified, the observations that people differed by location implied that specific aspects of the residential area have a significant impact on people's lives. In large part, it is the continuing belief in the importance of neighborhoods on the lives of residents that underlies some of the fundamental questions characterizing current neighborhood research, namely, how neighborhoods affect their residents and what conditions are minimally desirable for people with different backgrounds, needs, and life-styles.

The Planning Perspective. Research conducted within the framework of human ecology paid little attention to how physical and service features of neighborhoods affected personal and group life. In part, the ecologists' neglect of such specific relationships stemmed from their orientation toward planned change through active intervention and urban design. In addition, the ecological focus on cities inhibited investigations of within-neighborhood phenomena, or investigations that took individuals or families--rather than entire areas--as the unit of analysis. It was not until researchers took on a more specific planning orientation that empirical evidence regarding the relationship between environmental features and individual and social outcomes began to accumulate.

Much of the applied research on neighborhoods attempts to assess the validity of the neighborhood as a planning unit, a premise successfully fostered by Clarence Perry (1929). Following early sociological thinking that neighborhoods should foster primary social relations, Perry was concerned that environmental planning should facilitate "local community life." The major planning issue was how environmental design could have a positive impact on social life: "to provide a physical environment which...maintain(s) primary, face-to-face social contacts and associations within the city" (1929). Perry conceived of the neighborhood unit as a self-contained area, providing necessary social services, social relations and housing facilities, within the city at large.

Although the community designers tinkered with Perry's ideas in implementing the notion of the neighborhood unit, his basic premise of the social importance of neighborhoods became a tenet of environmental

planning and neighborhood design. It was not until after World War II, however, that research began to accumulate on the effect of specific aspects of neighborhood design on residential satisfaction and on social relations. In large part, evidence from such research led to a reassessment of the validity of the neighborhood unit as a planning principle, since many of the findings were surprisingly negative. Gans, for example, found that neighborhood design had little impact on the social life of a suburban community (1967). The reasons why people were better integrated into the social life of the community had little to do with the physical layout of the neighborhood and much more to do with their social class and other personal qualities. Others have also rejected Perry's formulation that the sociological processes and functions of the neighborhood are a consequence of environmental design (Keller, 1968; Berger, 1960; Slidell, 1972). It is now believed that the primacy that Perry and his followers attributed to the neighborhood unit reflected an oversimplified notion of how social life occurs in modern communities. Social interactions, for instance, seem to occur not merely on the basis of propinquity or geographical contiguity, but rather on the basis of a range of personal and familial factors.

Research from a planning perspective has several implications for the study of neighborhood quality. First, the findings call into question the notion that a high quality neighborhood is one that provides virtually all of the social support systems, services, and facilities essential to the conduct of the daily lives of residents. Second, some planning research shows that personal life-styles are often surprisingly unaffected by elements of physical design; people are quite good at overcoming or adapting to presumably negative features and

sometimes equally good at ignoring presumably positive features. Indeed, features that urban designers might consider desirable or life-enhancing are not necessarily appreciated as such by residents. Finally, the range of particularistic findings that marks planning research implies that the quality of a neighborhood may indeed be a function of the perspective one takes in judging quality. Both the concept of neighborhood quality and procedures for measuring neighborhood quality need to account more for the diversity that has been observed regarding personal and familial needs, values, and expectations.

The Psychological Perspective. In general, the psychological approach to research on neighborhoods takes the individual as the unit of analysis and is concerned with how an individual reacts mentally or behaviorally to the residential environment. To date, psychological research has concentrated on three themes: neighborhood definition, person-environment fit, and environmental attitudes.

Research on the mental images or maps of residents has highlighted the difficulties in developing a standard definition of the neighborhood unit. Lee, for example, reported wide variation in the spatial maps that define people's notions of residential neighborhoods. He used the idea of a "socio-spatial schema" to explain individual differences in the mental maps of neighborhoods and suggested that the formatting of schemas depends on the nature of the physical environment as well as the nature of the individual resident.

Neighborhoods have also been the vehicle for studying more abstract notions of person-environment fit. Here the premise is that individuals vary in their needs, interests, expectations and values and that

neighborhoods vary in the extent to which specific needs, etc., can be satisfied. Thus, certain neighborhoods will be more suitable to certain kinds of people and less suitable for others.

Finally, research on individual attitudes toward the neighborhood and neighborhood attributes characterizes a third psychological perspective. Some attitudinal studies concentrate on the way in which objective conditions in the environment are perceived and interpreted by individual observers; other attitudinal studies are more concerned with the prediction of individual behavior vis-a-vis the environment.

Psychological approaches to the study of neighborhoods have several implications for the study of neighborhood quality. Findings suggest that there is great variability in how people experience the environment--in terms of either mental experiences (e.g., mental maps, evaluations) or behavioral experiences (e.g., activity patterns, consumption patterns). The various studies thus reinforce the need to incorporate an individualistic approach to the study of neighborhood quality, since how neighborhood conditions are experienced is at least partly a function of personal and familial characteristics of residents.

Research on Neighborhood Quality

We have seen how neighborhood phenomena have been of interest to sociologists, planners, and psychologists, using a number of substantive perspectives and methodological techniques. Only recently, however, has the study of neighborhood quality become an independent focus of investigation. In general, research on neighborhood quality is based on two related assumptions. One is that the quality of a neighborhood is a significant component of the residents' overall quality of life, and that understanding neighborhood quality implies a better understanding

of the causes of personal and societal well-being. A second assumption is that the quality of residential environments, including neighborhoods, is a legitimate concern of public policy and that residential environments can be manipulated and controlled by the public sector.

While we assume that the neighborhood and its attributes can be manipulated and thereby affect the well-being of individuals and groups, the precise effects of specific interventions are not always predictable. Like the environmental designer, we may think of the policy agent as an "innovator of means and not of ends....What he lacks most at present is the ability to predict the consequences of his decisions for human behavior." (Lee, 1968) Thus, an important reason for reviewing research on neighborhood quality is to provide a better empirical basis for the formulation of social policy.

Not all research findings will be equally useful in the formation of neighborhood policy. In part, the usefulness of research depends on its substantive orientation. For example, a study which examines social cohesion in terms of voluntary organizations within the neighborhood may be of only minor interest to public policy makers, if only because such processes are ordinarily considered to be outside the proper domain of public intervention. On the other hand, a study which examines the effect of institutional and individual behaviors on neighborhood conditions may be more directly relevant to policies on neighborhood quality.

Aside from the substantive orientation, the usefulness of neighborhood research for policy formation depends on the degree to which the findings can be generalized to other settings. Very broadly, we may have confidence in the generalizability of a study if we understand why observed effects occur and, in particular, if our conclusions concerning

cause and effect are not due to idiosyncracies of the measurement process.

To use research as a basis for social policy, therefore, it is necessary to know how robust the findings are with respect to the major conclusions of the study. The results of some studies, for example, may be valid only for certain definitions of neighborhood (e.g., a small group of spatially contiguous houses), while other studies may apply more broadly to other definitions of neighborhoods. Similarly, we may reach different conclusions about the relationship between neighborhood conditions and neighborhood quality depending on how we operationally define the conditions and measure for quality.

Our analysis of the research on neighborhood quality suggests three broad issues that any researcher necessarily confronts either in attempting empirical research or in the analysis of findings from a large number of studies. The issues deal with the definitions of the neighborhood, the definition of neighborhood quality, and the methods or scales used to measure neighborhood quality. None of these issues is strictly a question of "method;" rather, they involve both substantive and technical considerations. The first two issues are addressed as part of the discussions in Chapters II and III, respectively. The last issue which has many complex components, we address in Chapters IV and V. In Chapter VI, we apply our analyses to HUD's Annual Housing Survey, in many ways a current prototype for research on neighborhood quality. Finally, in Chapter VII, we discuss an agenda for future research on neighborhood quality, given gaps in existing knowledge and the directions that social policy is likely to take.

CHAPTER II
DEFINING THE NEIGHBORHOOD

The neighborhood is a commonly accepted, yet imprecisely defined entity. People speak of the neighborhood as if they and their listeners know what they were talking about. Social surveys often ask people how they feel about their neighborhoods without ever defining what the term means. Since nearly everyone responds to the questions, we assume that people view themselves as living in a neighborhood. When we hear someone discuss their neighborhood, we understand what they are talking about when they say: "My neighborhood is going downhill," "I live in a good neighborhood" or "I want my children to go to the neighborhood school." And yet, if we were asked to do so, we might have difficulty describing in detail what constituted this person's neighborhood and whether it represented a few houses around him or an area of a square mile or more. In contrast to the clear cut political boundaries delineating one's city, a county, or a state, the precise dimensions of the neighborhood seem ephemeral. Unlike these governmental domains, the neighborhood eludes easy definition.

If the neighborhood were not an important entity, then it might not matter how we defined it. But as we noted earlier, neighborhoods and their attributes are important from a public policy and research perspective. And in order to measure the quality of neighborhoods and their attributes, we must have some idea of what the neighborhood represents, i.e., how it is delineated or defined.

In this chapter, we first explore the fundamental question of whether or not neighborhoods exist in the context of American cities. We then consider the various ways neighborhoods have been defined from

the perspective of planners, policy makers, and researchers and from the point of view of community residents. Attention is also given to the various size definitions used for delineating neighborhoods. Finally, we draw some conclusions about the importance of defining neighborhoods and the difficulties in doing so.

Do Neighborhoods Exist?

An important question that must be dealt with in any attempt to define neighborhoods is: to what degree do they exist and what impact, if any, do they have on people's lives? Neighborhoods often conjure up an image of a place where we spend much of our time either working, shopping, sending our children to school, attending church, or socializing. It is the place where many of us grew up and where we sometimes remained when we reached adulthood. It is an important focus of much that takes place in our daily lives.

This image of neighborhood no longer seems to represent the type of place in which many of us now live. With advances in transportation and communication, we no longer have to live near our work or shopping. Moreover, many of us move away from the neighborhood and even the city or suburb in which we grew up. It would appear then that only fragments of our lives are spent in a given neighborhood and while there, we find numerous opportunities to work and socialize outside the local setting. With increased affluence, more households are economically self-reliant. As a result, we are less dependent on neighborhoods as places in which to work or on our neighbors as friends or as people from whom we seek assistance. Compared to what the urban neighborhood once was, a primary locus of everyday activity, the neighborhoods of today's cities no longer appear central to the lives of many of us.

Despite the limited role the neighborhood appears to play, several authors indicate that in certain places, the local setting still is significant to many urban residents. For example, it has been shown that the neighborhood is the setting for strong social ties in a number of working class communities in the U.S. and Great Britain (e.g., Gans, 1962; Young and Wilmott, 1962; and Suttles, 1968). In these communities, intensive interaction among nearby relatives and neighbors was demonstrated. While residents of an East London neighborhood tended to organize their social relationships around "mum," usually the wife's mother, residents in Boston's West End and Chicago's West Side clustered into peer groups based on age, location, ethnicity, and sex. Suttles, in particular, showed how relationships among these groups created a social order and trust among the local inhabitants (1968). In a study of West End residents, attachment to the neighborhood was shown to be significant as demonstrated by the social uses residents made of their homes and the surrounding streets. Besides meeting with neighbors in their homes, regular use was made of street corners or taverns for contact with one's neighbors (Fried and Gleicher, 1961).

Irrespective of these studies, ethnic working class neighborhoods are not typical of metropolitan areas in the U.S. (Fischer, 1976). For most urban residents, the availability of social ties outside the neighborhood overshadows their relationships with the neighbors around them. According to Wellman and Leighton (1979), the primary links between friends and relatives in the neighborhood have been liberated in large part by increased mobility and, concomitantly, a widening of social contacts. In an examination of social networks in a Toronto neighborhood reputed to be one of the more socially cohesive areas in

the city, Wellman (1979) found that the local ties of residents were fewer in number than their contacts with friends and family outside the neighborhood. Nevertheless, neighboring was still an important element in peoples' lives. Similar reports of extensive neighboring have also been shown in studies of suburban residents (Fava, 1958; Tomeh, 1964; Gans, 1967; Michelson, 1977).

In addition to the neighboring that takes place in many residential settings, there are other factors supporting the contention that neighborhoods do exist in our metropolitan areas and that they do significantly impact on the lives of their residents. First, significant proportions of people tend to live in one location for extended periods of time. In the Detroit metropolitan area, for example, we found that half of all households were living in their present dwelling for at least five years, while nationally, more than a third occupied their dwellings for at least eight years (Rodgers, et al., 1975; U.S. Department of Commerce, 1980). It would seem then that urban residents have extensive opportunities to know and interact with their neighbors. In fact, it has been shown that length of residence is an important correlate of neighboring and friendship in the local setting (Kasarda and Janowitz, 1974; Connerly, 1980).

Second, despite the centrifugal forces of work, shopping, and entertainment that draw people away from their neighborhoods, people still live near each other, raise children in proximity to other households who send their children to the same school, and experience the same problems affecting the quality of urban life such as local services, taxes, pollution, crime, and the physical appearance of the community. Furthermore, neighbors are jointly affected by changes

imposed upon them by the outside world, such as zoning decisions, the introduction of a new highway, the closure of a local school, or the entry into the community of an alien population. The ability to leave the neighborhood for work, shopping, or pleasure does not alleviate the common plight that propinquity often thrusts upon neighbors. The simple act of living near others forces people, at least at certain times in their lives, to share common responsibilities with their neighbors, whether they like it or not.

Survey data from the Detroit area indicate that residents tended to specialize in the ways they interact with their neighborhoods. While some people spent considerable time with neighbors who live on the same block, others reported having a significant proportion of good friends living within the broader neighborhood. More than half of the adults said they met with neighbors at least monthly and four in ten noted that at least a third of their good friends live within a mile of their residence. Still others participated actively in community organizations such as block clubs, school affairs or church groups. More than eight in ten adults in the Detroit area were involved in some aspect of neighborhood life (Connerly, 1980).

Thus, it would appear that while the neighborhood is no longer a self-sufficient entity in which people spend much of their lives, neither is it a place in which residents are immune from their neighbors and the surrounding environment. To paraphrase Suttles (1972), it is a partial and specialized institution rather than a total community approximating a self-sufficient commune. It is partial in the sense that it has greatest relevance for those aspects of people's lives that are based on physical propinquity. It is specialized in that it has the

most relevance for residents who, because they have children, have lived in a neighborhood a long time, or because of vested interests or ideology, have become involved in neighborhood life.

We can conclude that the neighborhood continues to be an important, albeit limited, element of urban life. However, because people differ and are selective in the ways in which they use neighborhoods, it is difficult to arrive at a single, concise definition of its meaning and size. Neighborhood definitions should reflect the broad and varied manner in which local areas are defined by their residents. That is, definitions should depend upon the uses people make of their local area and the particular circumstances in which they find themselves. Nevertheless, there have been numerous attempts over the years to develop consistent definitions and delineations of the neighborhood.

Neighborhood Definitions - A Historical Review

During the past fifty years, several attempts have been made by planners, government officials, social researchers, and neighborhood residents to define neighborhoods. While many have been prescriptive in nature and made for administrative or planning purposes, other attempts at defining neighborhoods have been analytical and made by university-based researchers. One analytical approach is commonly referred to as natural area analysis while later attempts at systematically defining neighborhoods have relied on concepts of cognitive mapping.

Administrative and Planning Definitions. Perhaps the best known proposal for defining neighborhoods was that of Clarence Perry as part of his work for the New York Regional Planning Association (1929). Perry's neighborhood unit concept was viewed as a scheme for the arrangement of family life in the community. The elements of the

concept were relatively straightforward. The unit was based on a population small enough to support one elementary school, i.e., 3,000 to 10,000 people. The size was important because the elementary school was at the geographic center of the neighborhood and was situated such that no child would have to walk more than one-quarter of a mile. Other neighborhood facilities such as a church, a library, and a community center were located near the school. Integrated throughout the neighborhood was a system of parks and playgrounds. Traffic from outside the neighborhood was inhibited from passing through it by the placement of roads on the perimeter of the housing. The roads also served as the boundaries of the neighborhood. Finally, shops and stores were positioned on the neighborhood's edge along the perimeter roads.

Perry's neighborhood unit concept has been described by various critics (Isaacs, 1948; Dewey, 1950; Dennis 1968) as romanticizing small town living and failing to consider the heterogeneity and mobility of the contemporary urban population. It has also been criticized as being overly prescriptive and not necessarily reflective of the true patterns of individual and family life.

Other attempts have been made to prescribe the boundaries of neighborhoods in urban areas for administrative and planning purposes. Over the years, local politicians and planners working for various community organizations have spatially organized the city according to neighborhood designations such as school districts, political wards, Catholic parishes or census tracts. Sometimes these designations were coterminous but more often, the boundaries varied so as to satisfy the requirements of each separate organization making the designation. On occasion, neighborhood designations have meaning to local residents.

For example, at certain times in people's lives such as when they have children of school age, the school district, as the defined neighborhood, can become salient to them. In Chicago, residents with a large proportion of families with children were more likely than other residents to define their neighborhood in terms of the size of the school district or Catholic parish (Hunter, 1974).

Natural Area Analysis. Besides the prescriptive approach to defining neighborhoods, efforts have been made to systematically and analytically describe them. The classic approach to analytically defining neighborhoods was the description of a city's "natural areas". This approach, as pioneered by Park and Burgess, assumed that neighborhoods could be defined by looking for areas whose residents were ethnically, racially or economically homogeneous (Park, et al., 1967: 40). Because the urban spatial structure was segregated in terms of these characteristics, variables which measured them could be used to differentiate natural areas or neighborhoods within a city. These variables have been readily available through the U.S. Census but the mobility of the populations between geographic areas raises the question of the validity of definitions based on data that are gathered so infrequently.

Nonetheless, natural area analysis has been particularly adept at illustrating the continued importance of ethnic neighborhoods and that ethnicity is an important criterion for the delineation of neighborhoods. Such well known neighborhoods as the Hill in St. Louis, the North End of Boston, and the Chinatowns of New York and San Francisco demonstrate how some neighborhoods, corresponding to census

tracts, are delineated by the presence of a single dominant ethnic group.

Natural area analysis has also focused on how ecological or physical boundaries, such as major roads, railroad tracks, parks or other land uses separate areas of the city by impeding social interaction and use of common facilities. This approach has been confirmed in Chicago when residents, asked to identify the boundaries of their respective neighborhoods, respond in terms of ecological barriers such as streets and railroad lines (Park, 1952).

Although natural area analysis uses fairly systematic methods for delineating neighborhoods, the approach has been criticized since it relies too greatly on demographic measures of homogeneity such as socioeconomic status. While such data suggest how broadly delineated areas differ from each other, they provide no clear demarcation showing where one neighborhood ends and another one begins.

Cognitive Mapping. Even data on ethnicity fail to provide a clear enough map for differentiating the city. While much of Chicago's South Side is black, for instance, it is still subdivided into general neighborhoods that, according to Suttles, "are each defended by its adolescent gangs, community groups, and forbidding reputation" (1972:28). To negotiate neighborhoods such as these, people must impose their own mental or cognitive maps upon the geography of the city. It is these maps, Suttles argues, that more appropriately form the basis for the delineation of neighborhoods (1975).

Perhaps the most systematic approach to defining neighborhoods based on the mental maps of residents was undertaken by Lee in Cambridge, England (1968). Lee was aware that natural areas did not

necessarily coincide with the activities of people in space. He wrote "...it is reasonable to expect that since [people's] behavior changes much more rapidly than the physical environment, the method [natural area analysis] may sometimes be misleading" (Lee, 1968:241). By examining both the maps drawn by urban residents and the important elements in their physical and social environments, Lee hoped to demonstrate that individuals develop their own socio-spatial schema representing a personal delineation of their neighborhood.

Lee's findings indicate that the residents of Cambridge had highly differentiated neighborhoods, some being very large while others were quite small. He also showed that residents of higher occupational status, who travelled longer distances to work and who lived at their residence for longer periods of time were most likely to view their neighborhoods as large in scale; short-term residents of low occupational status who travelled shorter distances viewed their neighborhoods as small. Finally, Lee showed that a person's mental image of his/her neighborhood tended to correspond to the breadth and intensity of his daily activities engaged in within the city.

Since Lee's work, other studies of people's cognitive maps of neighborhoods have corroborated many of his findings (Orleans, 1972; Everitt and Cadwallader, 1971). Studies have also shown that various types of respondents understand the concept of the neighborhood and that they are literally able to draw the boundaries of their neighborhoods with little difficulty. While residents of highly identifiable places, such as Boston's Beacon Hill, were easily able to delineate their neighborhood (Ross, 1961), residents of areas that lack a clear identity in the public mind were also able to perform similar tasks (Haney and

Knowles, 1978). There is some disagreement, however, about the correspondence of residents from the same area in drawing their maps. Lee (1968) and Sanoff (1973) found that neighborhood residents drew highly differentiated maps but Haney and Knowles (1978) found a high degree of boundary correspondence in the maps drawn by residents from the same neighborhood.

In terms of the size of the neighborhood, Lee demonstrated that the model neighborhood in his sample was represented by an area of about one-tenth of a square mile. In contrast, Perry's neighborhood unit was eight-tenths of a square mile in area. Other proposals for neighborhoods reflect an area similar to Perry's, although some researchers suggest that the neighborhood is a considerably smaller physical unit. In the the British new town of Stevenage, for example, planners designed neighborhoods that were approximately one mile in area; a study of friendship patterns of the new town residents showed that three-quarters of the respondents' visitors came from the immediate surroundings representing an area one-fifth of a square mile (Wilmott, 1962). A similar finding was reported by Gans (1967) in his Levittown, New Jersey study, where he demonstrated that the planned neighborhoods assumed no social significance; the sub-block or micro-neighborhood was of most salience for residents in their social relations.

Others have also suggested that the micro-neighborhood rather than the macro-neighborhood is a more meaningful unit for residents and therefore should be seriously considered by planners. Shuval, in her study of new immigrants in Israel, posited that the micro-neighborhood was the place where neighbors with diverse ethnic backgrounds would most likely come into contact with each other, thereby enhancing chances of

achieving a successfully integrated community (1962). Micro-neighborhood was defined as the area containing the respondent's dwelling and the neighboring dwellings on both sides of it. Her proposal was instrumental in the planning and housing of a new neighborhood (Marans, 1978) and in subsequent evaluations of neighborhoods and new towns (Lansing, et al., 1970; Zehner and Chapin, 1974; Zehner, 1977; Ginsberg and Marans, 1979). However, when a sample of nearly 1200 residents from the Detroit region were asked to describe the size of their neighborhood, only three in ten characterized it as being either "this immediate block" or "the 5-6 houses nearest mine." One-fifth described their neighborhoods as encompassing a 2 to 5 block area while another three in ten said they thought their neighborhood was about a mile square or larger (Lee and Marans, 1980). Clearly, there is enough evidence to suggest that, because of the various scales at which people conduct their everyday activities, no single delineation of neighborhood is totally appropriate for everyone nor will people consistently define their neighborhoods in the same manner.

As we noted earlier, neighborhood boundaries prescribed for political, administrative and planning purposes often are meaningful to people at certain times in their lives. Another type of prescribed neighborhood which sometimes corresponds to the definition given by residents is the "defended neighborhood," a term coined by Suttles (1972) to describe a situation where neighbors band together in various ways for protection from the outside world. Defended neighborhoods are often characterized by an association organized to protect residents against crime, unwanted alien populations, attempts by city officials or private enterprise to alter local land use patterns and, more

positively, to rehabilitate deteriorated homes, preserve architecturally or historically significant buildings, and provide services. Where neighborhood associations are important, it is the boundaries defined by such groups that help delineate the neighborhood. For example, Hunter (1974) found that residents of Chicago were more likely to know the boundaries of their neighborhood if they were members of an association that represented the local community. Generally, the boundaries delineated by neighborhood associations are imprecisely defined and fairly broad, as these organizations require a large enough constituency so as to be recognized as important by city politicians.

Summary

There are a variety of ways in which the neighborhood can be delineated, each of which is appropriate for certain people, for certain situations, and at certain times. Natural area analysis highlights, in particular, the importance of ethnically defined neighborhoods and the role ecological boundaries play in aiding neighborhood delineation. Studies of cognitive maps have shown the importance of the activity scale at which urban residents operate in determining their own personal delineation of neighborhoods. At times, cognitive maps are sensitive to administrative delineations of local areas, and to the boundaries of "defended" neighborhoods. In the latter case, the boundaries established by neighborhood associations are instrumental in defining the neighborhood.

That there are a variety of ways in which the neighborhood is delineated is attributable to the development of specialized ways neighborhoods are used. As indicated earlier, self-contained, autonomous neighborhoods, for the most part, do not exist in the modern

city. Nonetheless, the continuing fact of residential propinquity has not resulted in the complete loss of the neighborhood's importance. The neighborhood continues to play a number of specialized roles that relate to the particular characteristics of the households and the political and social environment that surrounds them. How the neighborhood is defined depends on the type of neighborhood that is most relevant to the individuals who live there.

CHAPTER III

DEFINING NEIGHBORHOOD QUALITY

The concept of quality is no less difficult for the researcher and policy maker to define than that of neighborhood. A review of several dictionaries offers a variety of meanings which sort themselves into two somewhat distinct groupings. One which has assumed usage more recently focuses on the degree of excellence which some thing or entity possesses. Explicit in this definition is the notion of scaling of excellence or goodness which in turn implies some standard against which measurement on that scale can be compared. At the same time, this definition suggests that the measure of goodness applies to the entity as a whole, particularly when viewed in light of the more established definition of quality. According to one source, quality can be a characteristic, a feature or an attribute of an entity which makes that entity what it is.

With respect to the neighborhood, we can capitalize on this conceptual distinction and talk about its overall or global quality - a measure of excellence or goodness of the neighborhood as a whole - or we can refer to the characteristics, attributes, "qualities" or dimensions which constitute the neighborhood, such as its housing stock, its population, and so forth. As we shall see shortly, each of these dimensions can also be rated or ranked for their goodness. Thus, we are able to discuss the quality of each of the dimensions of a neighborhood as well as the quality of the neighborhood as a whole.

This chapter first discusses four groups of indicators that have been reported in the literature and used to measure or infer overall neighborhood quality. It then considers various dimensions of

neighborhood quality and the manner whereby each has been measured by researchers and planners. Embedded in the discussion is a sampling of empirical findings covering relationships between neighborhood conditions, people's responses to them, and the overall quality of neighborhoods. The chapter concludes with a discussion of a conceptual model for thinking about neighborhood quality and its determinants.

Global Measures of Neighborhood Quality

What measures of goodness have been used to infer overall neighborhood quality? A review of the literature reveals that global indicators of neighborhood quality can be categorized according to four general groupings. These deal with health, housing conditions, the market value of housing and the evaluations and experiences of neighborhood residents.

Health. This group of indicators of neighborhood quality utilizes measures of physical and mental health and draws heavily from the urban ecological studies begun in the 1930s. The focus of these studies has been the examination of relationships between physical health and pathological variables on the one hand, and characteristics of individuals and their housing on the other (e.g., Schmitt, 1966; Dunham, 1965; Bagley et al., 1973). While the ecological studies, taken as a whole, have a number of shortcomings which warrant care in interpreting their results (Kasl, 1977), they do offer an array of health indicators often construed as measures of neighborhood quality. These indicators, derived from health agency or institutional data, have been aggregated by census tract and analyzed in relation to census data on population and housing. City census tracts with high incidences of tuberculosis, infant mortality, VD cases and suicide rates have been by inference

viewed as low quality areas in contrast to those areas where the incidence of physical disorders or pathologies was less prevalent. If relationships were found between measures of health and certain population or housing characteristics, then places where such characteristics existed were considered poor quality neighborhoods.

Health indicators as they relate to the neighborhood environment have also been the focus of research involving the movement of people from one area of a community to another, purportedly to a place of higher quality. Most representative of the work on the health effects of rehousing is the Baltimore study conducted by Wilner and his associates (1962) although other researchers have dealt with physical health effects of new housing for populations in Great Britain (Bhandari and Hill, 1960; Ferguson and Pettigrew, 1954) and in Hong Kong (Worth, 1963). In each of these studies, rehoused families were compared with families remaining in slums on several dimensions of morbidity and physical disability. With few exceptions (Ferguson and Pettigrew, 1954; H. Hooper, 1962), the health effects of rehousing as measured by a number of morbidity and disability indices were small.

The significance of the relocation and health studies for our purposes is not so much in their findings, but in the fact that the investigators focused on the physical and mental health of populations in specific residential areas and implicitly suggested that such areas with low incidences of diseases and disorders were better in quality than areas where the incidences were greater.

Housing Conditions. A second category of indicators implying overall neighborhood quality centers on the condition of housing units. Characteristic of this category has been the work carried out by local

urban renewal agencies in the 1950s that focused on assessing residential areas for their slum clearance and redevelopment potential (e.g., Boston Housing Authority, 1953). Areas where the physical condition of dwellings was structurally unsound, where vacancies were prevalent, where rents were low and where building coverage was high were considered poor in quality and therefore eligible for clearance and renewal.¹ Sources of such data were the U.S. Census or inspections made by "trained" observers who rated dwelling units on such dimensions as the condition of stairs, the adequacy of plumbing and structural soundness. On occasion, the American Public Health Association appraisal technique incorporating an assessment of environmental quality beyond the house was used (1960). But the technique emphasized the rating of individual dwellings in an area rather than their environs. More often, planners have relied on census of housing data covering city blocks or census tracts to identify areas suitable for clearance. Areas characterized by deteriorating and dilapidated housing units were explicitly earmarked for urban renewal.

Market Value of Housing. A third category of neighborhood quality indicators stems from the empirical work of economists and deals with the market value of housing in particular geographical locations. Several studies have examined specific neighborhood and environmental amenities in order to determine their relationship to property values. Kain and Quigley (1970), for example, in a study of the St. Louis area demonstrated that the value of housing, expressed in terms of rent or

¹If the residents of such areas displayed pathological tendencies or various forms of deviate behavior and the land was greatly in demand, the likelihood of the area being designated for clearance and redevelopment was enhanced. A classic example of the renewal process and the forces underlying it is reported in Gans (1959).

market value, was significantly related to the physical conditions of surrounding properties and two neighborhood characteristics - school quality and incidence of crime. Other economists have considered relationships between residential property values at a particular site and the neighborhood characteristics associated with that site in attempts to predict changes in property value resulting from environmental improvements (Ridker and Henning, 1967; Anderson and Crocker, 1971). For example, Anderson and Crocker found negative relationship between levels of air pollution and aggregated property values (1971); the bigger the level of pollution in the community, the lower the value of residential property. In each of the economic studies, selected attributes of the neighborhood were measured and, together with characteristics of the dwellings and households in the neighborhood, an overall measure of residential quality was imputed in the form of aggregated property values.

For each of the above categories, overall neighborhood quality has been inferred by numerous measures covering the degree of excellence or goodness of the residents' physical and mental health, the condition of dwellings in which they live or the market value of their homes and those of residents around them. In virtually all cases, measures have been derived from U.S. census data or local institutional and governmental agency records. Although there is little doubt that these objective measures are useful in understanding the condition of neighborhoods, several researchers have argued that using such data to describe the goodness or badness of an area may not be totally appropriate since the measures do not reflect the quality of neighborhood life as experienced and perceived by the people living

there (Campbell and Converse, 1971; Marans and Rodgers, 1975; Scharf, 1978)

Residents' Evaluation and Experiences. A fourth category capturing overall neighborhood quality, and one which has received considerable attention during the past decade, focuses on the evaluations, perceptions, and experiences of neighborhood residents. In fact, research falling within this category reflects the concern that, in the past, too much emphasis has been placed on objective indicators, such as those discussed above, in describing and assessing neighborhoods and using such information in public policy deliberations. More often, research in this category has attempted to understand the feelings (e.g., satisfactions) and specific behaviors (e.g., neighboring) of people living in a variety of residential settings. For the most part, this line of research has relied on the residents' verbal reports to obtain the data. Although the research has often been directed toward other ends, taken as a whole it offers insights into the meaning of neighborhood quality for different population groups.

Most characteristic of this research are attempts to address the question, how do people evaluate their neighborhoods? Evaluation of neighborhoods has usually been couched in terms of ratings or the degree to which people are satisfied with the places in which they live. Satisfaction traces its theoretical roots to Kurt Lewin and Robert Merton and has been defined as the perceived discrepancy between a goal to which one aspires (and expects) and the achievement of that goal (Campbell, et al., 1976). Among psychologists, satisfaction implies a judgment or cognitive experience in contrast to an affective experience. An affective experience is usually expressed in terms of happiness or

pleasure but unlike satisfaction, it has no links to one's aspirations.²

Satisfaction with place of residence and more specifically with the neighborhood first gained prominence in the late 1940s and 1950s with a series of studies focusing on propinquity and neighboring (Festinger et al., 1950; Caplow and Forman, 1950; Moge, 1956; Fried and Gleicher, 1961; Gans, 1962). Implicit in these studies was the belief that extensive and positive relations with neighbors were associated with positive feelings about the area in which a person lived.³ In only a few early studies, however, was the term satisfaction mentioned while none presented the questions, if any were used, designed to ascertain how residents actually evaluated their place of residence.

In the 1960s and early 1970s, a number of studies using social surveys began to appear which contained specific questions aimed at measuring people's overall evaluation of their neighborhood. In a national study of residential location and urban mobility, Lansing and his colleagues asked respondents how well they like their neighborhoods (1964). Of the people living in SMSAs throughout the U.S., more than half of the sample (57 percent) said they liked their neighborhood very much, 38 percent reported liking it moderately well while only 5 percent stated flatly that they disliked their neighborhood. Similar questions have been asked in sample surveys conducted in public housing projects, in new communities, in small towns, and throughout metropolitan areas.

²For an analytic as well as conceptual distinction between the cognitive and affective components of individual well-being, see Andrews and McKennell (1980).

³Although it was seldom mentioned, the residential area or neighborhood was intended to mean the housing project, the housing estate or the particular district that was being studied.

The like-dislike format has been used in the evaluation of public housing (Becker, 1974; Cooper, 1975) while Wilner and his associates (1962) asked both public housing residents and those remaining in a nearby slum how good their project (or neighborhood) was as a place to live. In other local area studies, people's feelings about the overall quality of the neighborhood have been tapped by asking how happy they were with living there (Bradburn, et al., 1970), how they rated the neighborhood (or locality) as a place to live generally (Troy, 1971; Barton, 1975) or for specific population groups such as the elderly, young children, or teenagers (Lansing et al., 1970; Appleyard, 1976; Zehner, 1977). Ratings of neighborhoods from excellent to poor have also been asked as part of the Annual Housing Survey (AHS) conducted by HUD since 1973.

Survey questions using a satisfaction format nonetheless have dominated the literature in recent years. Beginning with Wilson (1962), local designers of community, regional and national surveys have asked people to evaluate their neighborhoods using satisfaction-dissatisfaction scales varying from 2 to 11 points (Butler et al., 1969; Campbell et al., 1976; Hall and Ring, 1974; Department of the Environment, 1972; Francescato et al., 1978; Atkinson, 1977; Michelson, 1977; Ahlbrandt, 1978; Marans and Wellman, 1978; Gollin et al., 1975). At the same time, other researchers have used single questions designed to tap both the affective (happiness) and cognitive (satisfaction) components of overall neighborhood quality (Andrews and Withey, 1976; HUD, 1978) while still others have created neighborhood satisfaction indices from responses to several evaluative questions (Lansing, et al., 1970; Sanoff and Sawhey, 1971; Angrist, 1974; Zehner and Chapin, 1974;

Zehner, 1977; Marans et al., 1978; Francescato et al., 1979). Irrespective of the setting, the surveys indicate that respondents are likely to express high levels of satisfaction with their neighborhood as a place to live. In national and most local studies, less than one in ten respondents said they were dissatisfied or unhappy with there they lived, while one in five public housing residents nationally were dissatisfied with their neighborhoods (Francescato, et al., 1979). National and local area data also indicate that dissatisfaction tends to be higher among the poorly educated, young adults, blacks and those people who rent.

Overall neighborhood quality has also been conceptualized and measured by tapping people's sense of attachment or belonging to the place they live. Several researchers have asked residents whether they think of their neighborhood as their real home or just a place to live (Barton, 1975; Rodgers et al., 1975; Fried and Gleicher, 1961; Kasarda and Janowitz, 1974; Royal Commission, 1969), how proud they are of it (Wilner et al., 1962; Department of the Environment, 1972) and whether they feel a part of or attached to the local area (Gollin et al., 1975; Hunter, 1974; Taylor, n.d.). Similarly, quality has been implied by people's expressions of disappointment with having to leave their neighborhood (Bradburn et al., 1970; Royal Commission, 1969), and their expressed desire to move (Rossi, 1955; Cooper, 1972; Butler et al., 1969; Morris et al., 1975; Kasl and Harburg, 1972; Nathanson et al., 1976; Speare, 1974; Newman and Duncan, 1978) although desire to move has seldom been asked with reference to the neighborhood per se.

Finally, neighborhood quality has been inferred by responses to questions which ask people in an open-ended fashion what they like and

dislike about their neighborhoods (Greenbie, 1969; Bradburn et al., 1970; Rodgers et al., 1975; Curtin and Marans, 1979), why they moved there (Appleyard, 1981; Bradburn et al., 1970; Michelson, 1970), whether and how the neighborhood has changed (Ahlbrandt, n.d.; Zehner and Chapin, 1974; NORC, 1974), or will change in the future (Bradburn et al., 1970; Child in the City, 1978).

Dimensions of Neighborhood Quality

Earlier we mentioned that quality could refer to either the degree of excellence or goodness ascribed to some entity such as a neighborhood, or it could refer to one of several characteristics, qualities, or attributes which make up that entity. Our discussion thus far has focused on the first referent and has considered the various conceptualizations and approaches used to measure overall neighborhood quality. Our interest, for the most part, has centered on the gestalt of the neighborhood and the ways neighborhoods have been viewed and evaluated by residents.

With respect to the attributes of neighborhoods, we noted that these too could be graded or ranked according to their degree of goodness. In fact a review of the literature on neighborhoods reveals that specific attributes and the evaluation of them have received as much attention, if not more, than that given to global indicators of neighborhood quality. Attributes of the neighborhood which have been considered can be organized according to four somewhat distinct groupings. These deal with the physical environmental conditions of the

neighborhood, its location vis-a-vis elements of the urban scene, local services and facilities and the sociocultural environment.⁴

Physical Environmental Conditions. From the perspective of the environmental planner and the policy maker, this group of attributes can have a significant bearing on neighborhood quality, particularly as it is experienced by neighborhood residents. The attributes, taken as a whole, represent those things which are most visible to residents in the neighborhood and people in the outside world, and many are subject to alteration by design. Attributes in this group, often cited in the neighborhood literature, include traffic and street conditions, noise and pollution levels, the extent to which buildings are abandoned and/or rundown, the type of housing and its density, the type and amount of open space, the amount of litter and vermin and overall appearance. For the most part, these attributes can be quantified, although some defy quantification in the conventional sense of counting things or measuring them using some established yardstick.

A number of residential studies have measured actual neighborhood conditions, although most have considered only people's responses to the conditions. Unfortunately, only a few have examined both and analyzed them in relation to one another. For instance, in studies of neighborhood quality in San Francisco, Appleyard and his associates used traffic counts as the primary factor in differentiating residential streets from one another and then proceeded to investigate people's assessments of various street and neighborhood conditions (Appleyard and

⁴Other attempts at categorizing neighborhood attributes and the evaluation of them are found in Butler, et al., (1969), Carp et al., (1976), and Ahlbrandt and Brophy (1976). A factor analytic approach was used in each case and relied on data collected from a sample of a population within a single locality.

Lintell, 1972; Appleyard, 1976). Among their findings, they showed that, irrespective of the actual amount of traffic on the residents' streets, people were equally concerned about traffic hazards. Other physical measures of streets, such as those dealing with roughness and lighting levels, have been developed as part of a neighborhood services study by a team of political scientists at the University of Indiana (1975) while measures of noise have been made on San Francisco streets at different times of day and combined into a street noise index (Appleyard and Lintell, 1972). Ambient noise readings in residential areas have also been taken as part of a neighborhood quality study in the city of Detroit (Jacoby, 1971). Similarly, other studies have described the measurement of actual noise in residential areas in London (HMSO, 1963), in Los Angeles (Kryter, 1960) and in Sweden and Italy (Jonsson et al., 1969). In each of these studies, noise levels were examined in relation to people's evaluations. Findings from these studies show that, while relationships between noise and subjective responses exist, the relationships are quite modest. Weak relationships stem in part from variations in noise ratings of the same locale taken at different times of the day (Schultz, 1972).

Attitudinal studies have also used actual measures of air pollution in attempts to understand public perceptions of different levels of air quality (HEW, 1965; Degroot, et al., 1966; Jacoby, 1971). Although the evidence from these studies suggests reasonable agreement between the observer-based appraisals and physical measures of air pollution, there is concern about the accuracy of public perceptions of the incidence of pollution and tendencies to base public policy on these perceptions (Barker, 1976).

Questions focusing on the measurement of peoples' perception and evaluations of street noise, traffic, street lighting, road conditions and odors and smoke in their neighborhoods have been incorporated in household surveys at the national level (Annual Housing Survey, 1973 et seq.; HUD, 1978), at the regional or community level (Wilson, 1962; Rodgers, et al., 1975; Marans and Wellman, 1978) and in public housing (Department of the Environment 1972; Sanoff, 1973). None of these studies, however, present descriptive data covering actual physical measures of these conditions.

Studies which do consider actual physical conditions and characteristics of housing as attributes of neighborhood quality are legion. Planning commissions have typically used census block data covering housing dilapidation, plumbing and kitchen facilities, vacancy rates, age of structure, and number of rooms as indicators of residential quality while social researchers have used such indicators along with subjective responses to environmental conditions in attempting to model residential preferences, satisfactions and perspective mobility. More recently, designers of HUD's Annual Housing Survey have expanded upon these characteristics of housing by providing data on the availability of air conditioning, window coverings, roof insulation, heating and cooking fuels, and elevators in high-rise buildings.

Data on actual housing characteristics within residential areas are often described by observers from outside the neighborhood. Observers typically are trained personnel from census, local planning, and/or housing agencies, or survey interviewers or university students whose primary task is asking questions of the resident respondents. While the

measurements obtained by the observers are intended to be objective, that is everyone who counts is expected come up with the same number of structures having a particular attribute, judgment or a degree of subjectivity often is introduced when identifying and describing the attributes.

An even greater degree of subjectivity is associated with attempts to have residents indicate whether or not such housing conditions exist within their neighborhoods and if so, the degree to which the conditions are problematic or bothersome. Surveys have asked people about abandoned housing and non-residential structures (Rodgers et al., 1975; AHS, 1973 et seq.; NORC, 1974) and occupied housing units which are poorly kept up, poorly maintained, rundown or vandalized (Lansing et al., 1970; DOE, 1972; Zehner and Chapin, 1974; Cooper, 1975; Marans and Wellman, 1978). Still other surveys have asked people about their preferences for having different types and mixes of dwellings within their neighborhoods (Zehner, 1977; Marans and Wellman, 1978).

Related to the types of housing found in neighborhoods is the density of development, an attribute examined extensively within the context of a number of studies on residential quality. Neighborhood or housing density has been defined as the number of dwelling or housing units (sometimes people) within a specified geographic area such as an acre, a hectare or a square mile. Density calculations have been made for residential areas with data obtained from census, aerial photographs and land use or site maps. Where census figures do not exist for a specific residential area under study or they are out-of-date, actual field counts of housing units have been made at the time of study.

When census data are unavailable or area calculations are impossible to make, surrogate measures of density have been used in several housing and neighborhood studies. Some have considered independent observations of the extent to which the residential area is built up or open (Marans et al., 1976) while others have asked interviewers to make numerical estimations of the average distance between residential structures (Rodgers et al., 1975; Marans and Wellman, 1978).

Although neighborhood density has implicitly been considered an indicator of neighborhood quality, people's responses to density in terms of their perceptions of crowding have been used as a more explicit indicator of quality in recent years. Several studies have asked people the degree to which their residential settings are crowded and the extent to which crowded conditions are disruptive to their lives (Baldassare, 1975; Cooper, 1975; Lansing et al., 1970; Wilson, 1962; Zehner and Marans, 1973). Still other studies have considered crowding as measured by either actual density levels or perceptions of residents and its relationship to neighborhood pathologies such as crime, delinquency or health (Mitchell, 1971). In general, the results are as expected: the more dense the neighborhood (or census tract) the higher the ratio of crime, disease, social breakdown and so forth. While most of these relationships have been called into question as spurious, the link between residential density and perceptions of crowding has been established (Fischer, 1978). Actual density is a reflection of the extent to which a residential area is built up and, although it is generally associated with peoples' feelings about crowding, the

literature has repeatedly noted that the two concepts are quite different.

The residual amount of open space associated with a neighborhood has also been showed to be related to perceived crowding. In fact, the amount of open space has been considered an indicator of residential quality (Troy, 1971; Abt Associates, 1974). In addition to the quantity of open space, the type or types of open space near the residences is another important dimension used in describing the qualitative characteristic of neighborhoods. Open space has been described in terms of vacant lots, wooded areas, parks, school yards, playgrounds, bodies of water (rivers, lakes, streams) and hard surfaced open areas such as plazas (Menchik and Knight, 1974; Campbell et al., 1976).

Still another subset of physical attributes of neighborhood quality deals with the upkeep and cleanliness of residential areas. While few studies have actually measured the amount of litter, garbage, vermin, or other attributes of neighborhood upkeep and cleanliness, several have asked residents to assess the extent to which these conditions are present in their neighborhoods. Specifically, a number of studies have asked people whether they think their neighborhoods are well kept up or poorly kept up (Lansing et al., 1970; Zehner and Chapin, 1974; Cooper, 1972), or clean or dirty (Lansing and Hendricks, 1967). At the same time, the Annual Housing Survey has asked people whether or not trash, litter or junk can be found on the streets, in empty lots, or on other properties in their neighborhoods and the extent to which the presence of these conditions is viewed as bothersome. These studies have repeatedly shown that the perceived upkeep of the neighborhood is an important correlate of residential satisfaction (e.g., Marans, 1979).

Finally, neighborhood cleanliness has been considered in the judgments of trained observers, either as part of social surveys or community service studies (e.g., Hatry et al., 1976).

Related to peoples' perceptions of neighborhood upkeep and cleanliness is their assessment of the overall appearance of the residential area. Several studies have asked people to indicate whether or not they thought the area in which they lived was attractive or well planned in terms of its aesthetic quality (Appleyard, 1976; Bradburn et al., 1970; Zehner, 1977). Other studies have asked people to indicate which of the several residential settings presented to them in photographs they like the most and which of the settings would they choose as a place to live (Peterson, 1967; Sanoff, 1973; Cooper, 1975). These latter studies show that the aesthetic appeal or attractiveness of the residential environments is the key factor in people's choices.

Locational Characteristics. Another dimension of neighborhood quality represented in the literature is the positioning of the neighborhood relative to various places used by residents in performing their day-to-day activities. Implicit in the locational aspects of neighborhood quality is the concept of convenience and the ease with which people can move from their homes to specific places. The concept of convenience has been operationalized by the metric of distance, measured either in terms of travel time or mileage between the place of residence and several specific locations. Distance measures of convenience have been made for neighborhoods by using secondary sources such as maps and aerial photographs and normatively determining a threshold of convenience between homes and employment centers, schools, parks, and shopping. A similar but more direct method of measuring

distance involves asking people where they engage in specific activities and then, with the aid of maps or aerial photos, measuring the distance from where people live to those locations cited (Marans and Fly, 1981). Another form of measurement is the amount of time people say it takes them to travel to places they visit for specific purposes (e.g., Lansing, et al., 1970; Michaelsen, et al., 1976).

Neighborhood convenience has also been measured by asking samples of residents whether their neighborhoods are conveniently located or whether it is convenient for them or their families to reach specific places such as the region's central business district, places of employment, public schools, recreation facilities, grocery stores, regional shopping centers or places where family and friends live (Butler et al., 1969; Troy, 1971; Cooper, 1975). For the most part, the findings suggest that peoples' feelings about the convenience of their location is an important factor in understanding their overall satisfaction with the residential environment. Nonetheless, convenience is less salient in the minds of people when judging their neighborhoods than factors such as housing quality, safety, and the kinds of people who live around them.

In addition to the proximity of the residential location to explicit and implicit amenities, locational attributes have considered the distance between areas in which people live and disamenities in the environment. Close proximity to sources of air pollution, noise, traffic, smells, and "incompatible" land uses are often associated with low levels of neighborhood quality (Jacoby, 1971; Menchik and Knight, 1974).

Local Services/Facilities. A third group of attributes of neighborhood quality deals with services and facilities provided by either local units of government or private enterprise. People's decision about where to live and their assessments of their present neighborhood are often influenced by the quality of nearby recreation facilities and local public schools, the availability of public transportation, the proximity of shopping, the police and fire protection offered, the maintenance of streets and roads, or the frequency of trash and rubbish pickup. Perhaps the most comprehensive attempt to catalog measures of local public services has been prepared by Hatry and his associates at the Urban Institute (1977). The Urban Institute compendium illustrates, for a variety of public services, how efficiency and effectiveness have been measured in several communities, either in terms of the amount of use they receive, an objective indicator, or user and non-user attitudes. For example, in the area of recreation services, the satisfactions with local facilities of neighborhood residents as well as facility users (from both outside and inside the neighborhood) have been reported in a number of social and community studies (Rodgers et al., 1975; Marans and Wellman, 1978; Marans and Fly, 1981). Similarly, peoples' perceptions of the degree to which a particular recreation facility is crowded, attractive, safe and accessible as well as their judgments on the helpfulness of the recreation staff have also been used as indicators of the effectiveness or quality of the facility (Brower and Williamson, 1974; Hatry et al., 1977). Parallelling these subjective indicators are objective measures of quality such as the number of park users (visitations), reported

injuries, incidents of crime, and the proportion of citizens living with a specified travel-time distance of the facility.

The quality of local public schools has most often been measured in terms of peoples' perceptions and evaluations. In addition to an overall rating of the quality of local public schools, residents have been asked to assess neighborhood schools in terms of the quality of their teachers, the educational program, the physical plant and the safety of the facility for children (Bradburn et al., 1970; Rodgers et al., 1975). Objective indicators of local public school quality used to assess neighborhood differences include student-teacher ratios, school size, number of volumes in the library and student achievement scores.

In public transportation, quality measures have considered residents' assessments of the service available to them including the frequency of runs, the cleanliness of the buses, the distance from homes to bus stops and the degree to which they feel safe on the vehicle (Rodgers et al., 1975). At the same time, the actual distances between the home and the bus stop, time intervals or frequency of service, and reported crimes on transportation lines have been considered indicators of public transportation quality.

Behavioral, attitudinal and objective measures of a similar nature have been used in determining the quality of library services (Hatry et al., 1977), police and fire protection (Bradburn et al., 1970; Marans and Wellman, 1978; AHS, 1973 et seq.), health care (Becker, 1974; Dear and Taylor, 1979) and the responsiveness of local governmental officials in meeting the needs of the neighborhood or local community residents (Rodgers et al., 1975). Behavioral and evaluative measures covering

grocery stores and shopping in general have also been used (Fried, 1973; NORC, 1974; Rodgers et al., 1975).

Sociocultural Environment. Included in this set of attributes of neighborhood quality is the composition of the resident population, people's assessments of and preferences for neighbors described along various social and economic dimensions, the availability of friends and family in the neighborhood, the extent to which residents interact with each other and with neighborhood institutions, the degree to which the neighborhood is free from crime, delinquency and drugs, and, in the case of institutional or group housing, resident-management relationships.

In the past, neighborhoods have been implicitly characterized in the literature as good or bad by virtue of their residents being either wealthy or poor, white or black, poorly or well educated, young or old, or socially acceptable or deviate. Such characterizations are no longer used in inferring quality, although it is still possible to describe neighborhoods according to these and other characteristics of the population. More commonly, quality is made explicit by asking people to evaluate their neighbors as being desirable or undesirable, friendly or unfriendly or generally good or poor neighbors. Several studies, for example, have reported strong and direct relationships between the perceived friendliness of neighbors and neighborhood satisfaction (Lansing and Hendricks, 1967; Lansing et al., 1970; Zehner, 1971; Cooper, 1975).

An even more direct measure of neighborhood quality considering the population make-up is reflected in people's preferences for different types of neighbors. Studies have asked people to indicate the kinds of

neighbors they would prefer in terms of income and educational levels, racial mix, age composition or households with or without children (Rodgers et al., 1975; Cooper, 1975; HUD, 1978; Child in the City, 1978; Hamovitch and Peterson, 1969). Often preferences are expressed in terms of having neighbors who are similar in their demographic make-up to that of the respondent (Lansing et al., 1970; Zehner and Chapin, 1974).

At the same time, residents have been asked whether their neighbors were friendly, trustworthy, helpful, and in general supportive (Becker, 1974; Andrews and Withey, 1976; Zehner, 1970). In addition to perceptions, helpfulness has been measured by peoples' actual experiences in assisting or being assisted by neighbors in time of need (Chapin et al., 1972; Sanoff, 1973; Fried, 1973).

Related to the actual support neighbors give to one another is the degree to which they interact socially and visit in each other's homes. Numerous studies have examined the degree of contact among neighbors in racially integrated neighborhoods (Bradburn et al., 1970), in public housing (Department of the Environment, 1972; Cooper, 1975; Wilner et al., 1962), and in broader community settings (Fried, 1973; Chapin et al., 1972; Lansing et al., 1970; NORC, 1978). Still other studies have asked people whether they had friends or family living nearby (Rodgers et al., 1975; Cooper, 1975; Michelson, 1977) or whether they would like their neighbors as friends (Lansing and Hendricks, 1967; Zehner and Chapin, 1974; Zehner, 1972). Finally a number of studies have questioned respondents about their ability to recognize or name the people who live in the neighborhood (Lansing et al., 1970; Becker, 1974; Cooper, 1975).

Another aspect of the neighborhood's social environment deals with the extent to which people are involved or participate in community institutions, such as PTO's, church groups, and improvement associations. Often, however, these inquiries are preceded by questions aimed at identifying whether or not such institutions exist or are perceived to exist by the respondent (Kain and Quigley, 1969; City of Cincinnati, 1978). For residents who report the presence of a community organization and their affiliation with it, they are often asked about their level of involvement (Lansing et al., 1970; Bradburn et al., 1970; HUD, 1978) or whether the organization held meetings within the neighborhood (Wilner et al., 1962). Additionally, other surveys have asked residents about their concerns about various neighborhood issues and what they have done to voice them (HUD, 1978; NORC, 1974).

Another component of the social environment of the neighborhood touching on its quality is the degree of crime, delinquency, or vandalism that pervades the area. Crime indicators based on police statistics have been noted in metropolitan area studies (Rodgers et al., 1975) as well as in national reports (U.S. Department of Commerce, 1980). Other crime indicators have been based on people's reports of crimes against themselves, their properties or their neighbors (LEAA, 1978), on people's perceptions of the amount of crime in the neighborhood (Department of the Environment, 1972) and the degree to which they feel it is safe for them during the day and at night (Andrews and Withey, 1976; Appleyard, 1976; NORC, 1974; Cooper, 1975). A recent attempt has been made to determine the degree of correspondence between people's perceptions of safety in their neighborhoods and the objective crime reports of police departments in the Detroit region. (Lee and

Marans, 1980). It was found that, the closer people's definitions of the size of their neighborhoods were to the areal units for which crime statistics were reported, the greater the correspondence between the crime statistics and the resident's perceptions of safety.

Finally, an indicator used to assess the quality of public housing developments is the resident's evaluations of the performance of management and the degree to which the staff has been responsive to resident needs (Becker, 1974; Cooper, 1975; Francescato et al., 1979).

Modeling Neighborhood Quality

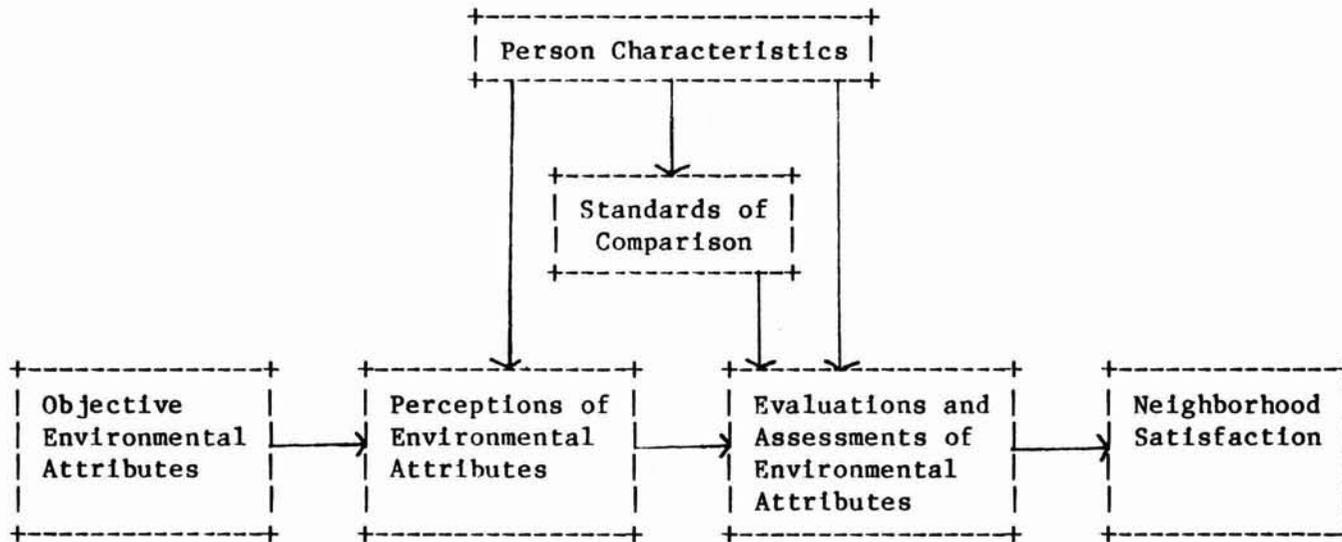
The above discussion has focused on the different conceptualizations of neighborhood quality and has considered them in terms of a set of global indicators and along four general dimensions. We have also noted that several of the attributes, categorized according to these dimensions and measured in either a descriptive or objective manner or subjectively, were related to a global measure such as sense of attachment or neighborhood satisfaction. Many of these relationships were identified as part of studies relying primarily on correlational analyses. For instance, Appleyard (1976) showed that the amount of traffic on San Francisco streets was associated with neighborhood interaction. Residents on highly trafficked streets were less likely to interact with their neighbors than were residents living on streets which were lightly trafficked. And using data from a study of planned communities, Lansing and his colleagues demonstrated that neighborhood satisfaction levels increased as the dwelling unit density of residents decreased (1970). In other studies, relationships between objective environmental conditions or subjective responses to conditions on one hand and neighborhood quality on the other were considered in a

multivariate context. That is, measures of objective conditions and measures of their goodness have been examined simultaneously in relation to some global indicator. This approach has spawned a number of conceptual models showing the manner in which attributes of neighborhoods are linked to overall neighborhood quality for different population groups. Similarly, models appearing in the literature covering household mobility have considered a variety of "push" factors of residential areas which prompt people to express a desire to move or actually change their place of residence. Several analysts, for example, have shown that the dissatisfactions with attributes of the residential environment contribute to actual or desired mobility, and are a function of the specific attributes themselves (Rossi, 1955; Wolpert, 1966; Clark and Cadwallader, 1973; Speare, 1974; Newman and Duncan, 1978). Others have argued that residential evaluations, while affecting the quality of physical attributes, also are influenced by the localized behavior and other social patterns of residents (Brown & Moore, 1970; Michelson, 1977). For instance, Michelson suggests that whether or not the expected behaviors of recent movers are fulfilled or their unanticipated behaviors are deemed undesirable can contribute to the success or failure of their residential environment (1977:24). Our purpose here is not to examine the determinants of residential choice nor the degree to which behaviors and reactions to behaviors are related to actual or planned mobility. Rather, we present a model which considers in some detail one of the intervening forces contributing to mobility and one which is central to our review--neighborhood satisfaction.

The model is an extension of the work by one of the authors in earlier efforts to understand how people respond to the communities in which they live (Marans and Rodgers, 1975). Its basic purpose is to suggest the manner in which the objective attributes of the residential environment are linked to the subjective experiences of people in that environment. The objective environment is defined in terms of physical, locational, and sociocultural characteristics and services and facilities provided by government and private enterprise. Various levels of subjective experience are included in the model; these differ in the directness of their assumed association with the objective environmental attributes. One level of experience (that of perception) is shown as being directly linked to the objective attributes, although it may be influenced by other factors as well. Other subjective experiences are indicated in the model as being only indirectly linked to the objective attributes. Furthermore, the characteristics of the individuals are shown to influence people's subjective experiences.

The linkages between elements of the model for neighborhood satisfaction are shown in Figure 1. Satisfaction as expressed by an individual is dependent upon his evaluations or assessments of several attributes of the neighborhood. The attributes which are most relevant to neighborhood satisfaction can, of course, be determined empirically. For example, the relevant attributes for a subdivision may be its population composition, the number of trees, the quality of the public schools, the market value of homes, the responsiveness of the local unit of government to complaints, the kinds of citizen involvement in local affairs, and the level of maintenance of the homes and their surroundings. How a person evaluates a particular neighborhood

Figure III-1



OBJECTIVE INDICATORS

SUBJECTIVE INDICATORS

attribute is in turn dependent upon two things: how a person perceives it, and the standards against which he judges it. The standards for comparison may include the level of a particular attribute (a) that has been previously experienced (e.g. less noise, closer to shopping); (b) that is available to reference groups such as friends and family (e.g. we've had more burglaries); or (c) to which he or she aspires or expects to have in the future (e.g. neighbors of a higher socioeconomic class, more space around us).

A person's perception of a particular attribute is related to but distinct from the objective attribute itself. The way a person perceives the environment is not necessarily equivalent to the environment as it actually is; the possibility of bias, inaccuracy of perception, or simply differences in perceptions among individuals in the same environment is recognized explicitly. A resident of a high density neighborhood may not necessarily feel crowded; another might.

A final element of the model is the set of variables labeled "person characteristics." The term is meant to include all characteristics, tastes, behaviors, and dispositions of a resident that can influence his perceptions and assessments. For example, people of different ages, races, and incomes may have differential perceptions of the safety of the neighborhood. Similarly, the extent to which the neighborhood impedes or facilitates the successful performance of people's desired behaviors can influence their perceptions and evaluations.

In sum, the model suggests the manner in which residents' evaluations of the quality of their neighborhoods are linked to objective environmental attributes of those neighborhoods. Implicit in

the model is the notion that satisfaction with one's place of residence is related to the evaluations of many neighborhood attributes. Explicitly, these evaluations are a function of the attributes themselves. But the nature of the relationships will differ depending on who the people are, where they have been in the past and what they want for the future, and what they are able and unable to do. Clearly, quality is a highly subjective and individually determined trait.

Summary

In this chapter we have discussed four groups of indicators used to measure or infer overall neighborhood quality. These cover health, housing conditions, the market value of housing and the evaluations and experiences of neighborhood residents. We have also considered numerous characteristics or attributes of neighborhoods which have been described or rated for their goodness. These attributes are categorized along four dimensions: physical environmental conditions, locational characteristics, local services and facilities, and the sociocultural environment. Finally, we discussed efforts to model neighborhood quality and outlined one approach to linking environmental conditions with subjective responses to neighborhoods for different resident groups.

CHAPTER IV

NEIGHBORHOOD QUALITY DATA AND THEIR SOURCE

Our review of research on neighborhoods has focused on definitional issues (Chapter II) and quality considerations (Chapter III), and illustrates the kind of data that can be made available to planners, policymakers and researchers interested in understanding neighborhood phenomena. At the same time, it suggests that the study of neighborhoods need not be restricted to a single approach or methodology. In this chapter, we briefly summarize and categorize the different types of data obtained as part of research on neighborhoods, and then review the methodological approaches used in generating them. In the following chapter, a more extensive discussion of the forms of data most appropriate to research on neighborhood quality is presented, particularly within the context of the survey approach.

Types of Data

Besides attempts to understand factors underlying the overall quality of neighborhoods, neighborhood research has generated a wealth of information about the specific characteristics or dimensions of neighborhoods and the manner in which these characteristics can be measured. As we have shown, the characteristics can be categorized into four major groupings: physical environmental conditions, locational characteristics, local facilities and the delivery of services, and the socio-cultural environment. Within each group, researchers have either described various characteristics or conditions of neighborhoods or discussed them in terms of perceptions, evaluations, or preferences. Descriptive information about neighborhoods and their populations has been referred to in the social indicator literature as "objective

indicators" which report on the physical or social state of one component of the residential environment (Campbell et al., 1976; Marans and Rodgers, 1975). At the same time, the perceptions, evaluations, and preferences of people with reference to their neighborhoods or any other aspect of their lives are characterized as "subjective indicators." Examples of the former include counts of the number of people in an area having tuberculosis, the number of households with incomes over \$20,000, and the number of homes that have been burglarized within the past 12 months. Residents' perceptions of the health and wealth of their neighbors and the extent to which their neighborhood is safe from crime are examples of subjective neighborhood indicators.

As we have seen, inferences about neighborhood quality in the early research on neighborhoods were based, to a large extent, on a number of objective indicators such as health and housing conditions. More recently, researchers studying residential environments in particular, and proponents of subjective social indicators generally, have argued that, in addition to knowing about the objective conditions surrounding people, it is important to understand the meaning of these conditions for different kinds of people if we are to have a more informed basis for making public policy.

Although it may be convenient for researchers and policy analysts to label the different types of data on neighborhood quality as either objective or subjective, it should be noted that the distinction between the two categorizations is not always clear. The interpretation of what should and should not be counted in the description of some neighborhood phenomena may involve judgement or some degree of subjectivity on the part of the informant. In Chapter V, we discuss this issue more fully

in the context of proposed strategies for generating both descriptive and evaluative data using the survey approach.

Sources of Data

In our review of the literature, we have seen that there are various approaches to and methodologies for generating different types of data about neighborhoods and neighborhood phenomena.

In some instances, the rationale for deciding why a particular approach or set of approaches had been used to gather data was also observed. Our review suggests that there are at least four factors influencing the choice of a data gathering mode. One relates to the phenomena or issues to be addressed by the study. Are the researchers concerned with the incidence of crime in an area or are they interested in both the incidence and the degree to which it is associated with fear as expressed by residents? In the first case, police records would suffice. In the latter, records supplemented by questionnaires tapping the residents' feelings would provide the needed information. A second factor influencing the methodological choice is the scale of investigation. For example, approaches to gathering behavioral information about residents of a small geographic area can be considerably different than the approach used to understand the behaviors of neighborhood residents throughout a metropolitan area. Another determining factor in selecting a method of data collection is the purposes for which the data are to be used. Are they intended for monitoring the changes taking place in a city's neighborhoods over a period of time (i.e., social indicator data) or are they designed to learn something about the internal dynamics of the population of a particular neighborhood? Finally, costs in terms of the funds and time

available to study neighborhoods can influence the choice of methodologies. With limitations in dollars, time, and trained personnel, it would be virtually impossible to examine and compare residents' responses to neighborhoods within a large city.

Many of the methodologies have their roots in the social sciences, and over the years have been used with increased regularity by urban planners, environmental designers, and policy analysts. Perhaps the oldest and most extensively used method of studying neighborhood phenomena is the tapping of archival data or other historical records. For example, the work of urban ecologists and others concerned with the physical and mental health of community residents relied on public health statistics and other institutional records as their major sources of information (Ferris and Dunham, 1939; Dunham, 1965; Schmidt, 1966). Similarly, census tract data covering population characteristics and size, and housing conditions, density, tenure, and costs have been used by social scientists, urban planners and policy analysts to describe and differentiate among neighborhoods in urban areas (Detroit City Plan Commission, 1962; Kain and Quigley, 1970; Rodgers et al., 1975). Other investigators studying housing and neighborhoods have used public school records to assess the performance of children (Wilner et al., 1962), local assessors records as a basis for predicting residential property values (Anderson and Crocker, 1971), crime records of local police departments (Rodgers et al., 1975; Taub et al., 1981) and county air pollution statistics in assessing air quality (Jacoby, 1971).

Additional sources of archival data for researchers studying neighborhoods are the maps and aerial photographs covering the geographic area under investigation. These graphic representations have

been used to identify and subsequently describe neighborhood phenomena such as specific buildings, land uses, vegetation, or other natural features. Researchers and planners have also worked with maps and photographs to measure distances between the residents' homes and places of interest such as recreational facilities, bus stops and freeway ramps or used them, together with population or dwelling unit counts, to calculate the density at which neighborhood residents live.

Another approach to gathering information about neighborhoods is through field visits and observation. Anthropological observations of neighborhood phenomena have been used as a supplement of archival data in urban ecological studies of single neighborhoods (Zorbaugh, 1929; Hunter, 1977), as a supplement to interview data in research on contemporary housing (Ziesel and Griffin, 1975; Ginsburg and Marans, 1980) and as a primary source of information about resident behavior in selected urban neighborhoods (Jacobs, 1961; Gans, 1962). Some investigators have actually lived in the particular neighborhoods they were studying (Kornblum, 1974; Gans, 1967; Howell, 1973; Suttles, 1978) and based their analyses on the activities they and their neighbors engage in, while others have used teams of observers to systematically record the behaviors of community residents and their interactions with the physical setting (Barker and Schoggin, 1973).

Besides observing the actions of neighborhood residents within the context of case studies, researchers have relied on interviewers or pollsters whose primary task is to conduct interviews with residents, to systematically observe and record information about the physical conditions of the residents' neighborhoods. Interviewer observation data have been collected on the mix of housing and other land uses

(Rodgers et al., 1975), the presence or absence of open spaces (Marans et al., 1976), the distances between dwellings (Marans and Wellman, 1978), whether or not automobiles are parked on the streets (Troy, 1971), and whether sidewalks and street lights are present on the block containing the respondents' dwelling (Hatry et al., 1977).

In each of these studies, observers were asked to record the presence or absence of some phenomena or, based on training, to gage some physical artifact of the residential setting, such as the distance between two points, the height of buildings or the cleanliness of streets.

For the most part, observational data, whether dealing with resident behavior or characteristics of the physical environment, are descriptive in that they indicate whether or not some artifact or activity is present and, if so, the number of such artifacts or activities that exist in the neighborhood. They may also be perceptual in nature in that informants must make a judgement in recording what he or she has observed. For example, trained inspectors have been asked to indicate the level of cleanliness of streets and yards using a four-point scale from "very clean" to "very dirty" (Hatry et al., 1977). Irrespective of the amount of training they receive, individual differences among inspectors in their perceptions of the amount of dirt present are likely to exist.

Perhaps the most frequently used method of gathering information about neighborhoods has been through the verbal or written reports of local residents. For the most part, information covering people's perceptions and evaluations of their neighborhoods and neighborhood attributes has been obtained through survey techniques involving either

face-to-face interviews, telephone interviews or self-administered mail questionnaires. Resident surveys have also provided information about people's preferences and behaviors with respect to residential environments.

The social science and marketing literature abounds with preferential studies asking people to choose between two products, conditions, or situations, or by asking them to express a preference by ordering an array of attributes from the most desirable one to the one that is least preferred. Preferential studies as part of social surveys are prevalent in the housing field as well, with several relying on visual stimuli in the form of photographs and drawings to elicit people's responses. Cooper (1975), for example, used photographs of different housing configurations to determine the density and type of public housing desired by low income families, while Michelson (1966) had people rank photographs of a wide range of neighborhoods in terms of their appeal as places to live.

As a way of identifying attributes of neighborhoods considered to be most desirable, a number of researchers have forced survey respondents to choose from among an array of neighborhood attributes. That is, trade-off games or forced-choice situations have been used to identify attributes of neighborhood quality which people would be willing to forego in favor of other attributes (Wilson, 1962; Hoinville, 1974; Knight and Menchik, 1974; Robinson et al., 1975; Marans and Wellman, 1978; Johnson, 1980). These tradeoff situations have been introduced in the context of social surveys involving either face-to-face contact between interviewer and respondent or through mail questionnaires.

In each situation, photographs or drawings of different housing and neighborhood scenes have been used to elicit people's responses to hypothetical environments. In some instances, residents' choices were analyzed in relation to the kinds of environments they actually live in or their evaluations of these environments.

Surveys have also been used to examine the behaviors or activities of people within their residential settings and in some instances, inferences have been made about neighborhood quality from the reported activities. Studies involving face-to-face interviews have focussed on neighboring (Festinger et al., 1950; Gans, 1962; Suttles, 1968; Michelson, 1977), on recreation and play (Lansing et al., 1970; Busby, 1976; Marans and Fly, 1981) or experiences with crime (Newman, 1972; Taub et al., 1981; Greenberg et al., 1981). Other researchers have examined an entire spectrum of resident behaviors by using time budgets within the context of surveys (Zehner and Chapin, 1974; Michelson, 1977). Many of these investigations have considered relationships between specific activities or activity patterns and people's satisfactions with their place of residence.

Moving behavior as determined by people's assessments of residential environments has also been examined within the context of social surveys. A number of studies have reported on the reasons people have moved from one dwelling to another (Lansing et al., 1964; Butler et al., 1969; Wolf and Labeaux, 1969; Newman and Duncan, 1978) or on factors associated with their desire to move (Rossi, 1955; Hamovitch and Peterson, 1969; Kasl and Harburg, 1972; Newman, 1974). A summary of the types of data and the sources of information used to obtain them is shown in Table IV-1.

Table IV-1
Types of Neighborhood Data

OBJECTIVE DATA			SUBJECTIVE DATA		
Type	Examples	Sources	Type	Examples	Sources
Descriptive	Health incidence of disease admissions to institutions mortality rates suicide rates	health statistics, hospital records	Perceptual	awareness of physical environmental conditions, public services, locational characteristics, sociocultural environment	resident surveys, interviews with key informants
	Population family income household size	U.S. Census, surveys	Evaluative	satisfactions, likes/dislikes vis-a-vis physical environ- mental conditions, public services, locational characteristics, sociocultural environment	resident surveys
	Housing property values condition density	U.S. Census, assessors' records, field visits, maps, aerial photos	Preferential	desire to move, choices, tradeoffs, vis-a-vis physical environmental conditions, public services locational characteristics, sociocultural environment	resident surveys, gaming simulations
	Learning reading scores absenteeism, years of schooling	school records, surveys			
	Crime crimes against person and property vandalism	police records, LEAA statistics, field visits			
	Environment air pollution level traffic counts noise level distances land uses, open space	county records, mechanical instruments, department records, field visits, maps, aerial photos, surveys			
	Behavioral mobility neighboring leisure travel	surveys, time budgets			

Summary

In this chapter, we have presented a categorization for the different types of data obtained in research on neighborhoods and neighborhood quality. We have also presented an overview of the sources of data including the methods used in obtaining them. One category of data has been referred to in the social indicator literature as objective while the second category is termed subjective data. Objective data are primarily descriptive in nature and are based on counts of neighborhood phenomena. Subjective data are those involving peoples' perceptions and evaluations of and preferences for neighborhoods and neighborhood phenomena and are derived, for the most part, from social surveys. With few exceptions, modern approaches to studying neighborhood phenomena have included a survey component, largely because residents' reactions to and activities within their residential setting are deemed most indicative of what the neighborhood is really like. In the next chapter, we consider more closely the use of sample surveys in neighborhood research and discuss a number of issues that need to be considered in using surveys to generate data on neighborhood quality.

CHAPTER V

GENERATING SURVEY DATA ON NEIGHBORHOOD QUALITY

Previous chapters in this monograph have discussed the substantive issues arising from empirical studies of neighborhoods, in terms of the concepts and ideas that have driven past research on neighborhoods and in terms of the body of knowledge that has accumulated about neighborhood quality. In this chapter, we turn our attention to the methodological issues involved in generating survey data on neighborhoods including various approaches to sample design and measurement.

In terms of its methodological characteristics, much of the research on neighborhoods comes from a tradition that has emphasized the case study. We have shown that data collection in this approach occurs largely through the work of a participant-observer. A relatively unstructured format is used which relies on the observer's judgment concerning the selection and recording of data elements. The choice of which neighborhood to observe is purposive, rather than probabilistic, as is the sampling of people and conditions within the selected area.

In the past twenty years, however, we have seen in neighborhood research an increasing use of the survey method, i.e. the use of systematic sampling techniques and structured instruments for data collection. Survey methods particularly characterize studies of neighborhood quality, for a number of reasons. First, is the connection between research on neighborhood quality and the more general field of social indicator research, developed among applied sociologists and psychologists over the last twenty years. Social indicator research focuses on monitoring societal and individual social well-being or

"quality of life" in America under the belief that various "domains" of American life -- including the neighborhood domain -- can be systematically measured and monitored much as the economic well-being of the nation is tracked by selected empirical measures. Thus, the idea behind the social indicator movement is to maintain a set of indicators for different domains of social life and to monitor sub-population differences and changes in these domains over time. Since social indicator data are potential grounds for social action, it is considered essential that the data be collected as objectively and comprehensively as possible. The marriage between social indicator research and survey research is therefore not unexpected. In the neighborhood domain, survey techniques permit the study of a large number of neighborhoods that vary in their characteristics. Survey methods are thus much more appropriate to the goals of social monitoring than the more traditional anthropological techniques characteristic of much of the early literature on neighborhoods.

A second reason for survey techniques in studying neighborhoods stems from the use of public opinion data to evaluate neighborhood quality. Neighborhood quality is a concept that has different meanings among different segments of the population. In order to insure a representative sample of public opinion regarding neighborhood quality, investigators rely on the systematic sampling techniques associated with the survey mode of research.

Similarly, neighborhood elements are often used to create composite measures representing a particular neighborhood characteristic. For example, the income level of households in a neighborhood can be used to create an indicator of neighborhood income. Here, too, systematic sampling within neighborhood units, possible with the survey mode, is a

desireable research technique in order to prevent biased estimates of neighborhood phenomena.

For these reasons, then, survey research has been the usual mode for assessing neighborhood quality. Generally, the kind of knowledge about neighborhood quality that funding agencies wish to have is more readily and convincingly obtained using survey methods.

A "sample survey" is not necessarily the stereotypical opinion poll, in which individual respondents give their attitudes and perceptions about neighborhood life. Rather, there are many variations in the design of surveys that allow for the generation of numerous types of data (e.g., data on evaluations, perceptions, behaviors), obtained from a number of sources, that refer to different kinds of neighborhoods and elements within neighborhoods (e.g., the block, the macro-neighborhood, individual residents, dwelling units, etc).

As our discussion highlights, an investigator has a choice of techniques to use in generating data on neighborhoods, where decisions about procedures have to be made at each stage of the research process, including the stages of sampling design, instrument design, field procedures, data processing, and data analysis. For example, in order to collect data about local areas an investigator must choose one or more types of informants to interview (e.g., resident, trained observer, architect). Depending on the type of information sought, a particular informant may or may not be suitable, and the quality of the data will suffer accordingly. For example, nonresident architects, are not likely to be good informants about actual social experiences in the neighborhood; residents, on the other hand, may not be good informants about actual crime levels.

The example of choosing informants illustrates the major themes of this chapter: a researcher is faced with many decisions in the process of designing and implementing a study of neighborhoods; the choices he or she makes will ultimately contribute to the worth or quality of the data he or she collects; and to the extent that the information a survey provides is of low quality--is inaccurate, incomplete, or largely irrelevant to the purposes of the study--then the conclusions or inferences based on the data will be unreliable or ungeneralizable, and, in the extreme case, simply useless.

To date there are not many widely shared standards for assessing either the quality of survey data generally or the quality of survey data on neighborhoods. Furthermore, the standards discussed in the methodological literature are generally abstract. Thus, one reads of the need for "valid" measurement procedures, or for measurement procedures free of error. Yet, the forms that valid or reliable procedures may take are not completely specified, either generally in surveys, or in particular with respect to neighborhood data.

It would be a large task indeed, to completely specify all potential sources of error or bias in neighborhood data, largely because neighborhood research involves many different concepts, different units of analysis (e.g. individuals, areas), and different types of data (evaluations, perceptions, behaviors). Ideally, one would like to develop an "error profile" for all possible types of data, much as Bailar and Brooks (1978) have done for a single form of data--unemployment estimates. Even for these, however, an entire monograph was written on basically one form of estimation. To cover in a similar manner all forms of bias pertinent to the variety of research strategies and data in neighborhood studies would be an enormous undertaking.

Our approach to the topic of data quality is to build on existing concepts of error and bias and apply those standards to typical forms of neighborhood data. Thus, throughout this chapter we raise issues that bear on the quality of the data obtained through a particular strategy. In so doing, we attempt to further thinking about definitions and standards as well as to provide a guide to designers and consumers of data on neighborhoods.

This chapter is organized around two general topics: sampling and non-sampling considerations. Within each section, a number of issues are discussed which address the complexity of designing measures and analyzing data obtained on neighborhoods. We deliberately omit more introductory or general approaches to survey techniques, which may be found in any of the standard texts on survey research. (Babbie, 1973; Lansing and Morgan, 1971). Instead, we have focused the discussion on special problems of survey design associated with studies of neighborhood quality.

Sampling Considerations

In setting out a plan for research on neighborhoods, there are at least two aspects of the sample design that investigators must consider: the designation of the sampling unit, be it a neighborhood or an element within a neighborhood, and the designation of the informant used to generate data.

Neighborhoods as the Sampling Unit. The most common reason for designating a neighborhood as the sampling unit is to make statements about one or more aspects of the neighborhood as a whole. This is the case when we are interested in such global characteristics of the neighbor-

hood as its quality, the condition of its streets, the amount of services received there, the quality of its housing, its socioeconomic level and so forth. Data from studies of neighborhood quality are frequently used to derive estimates of neighborhood conditions that characterize the entire unit; such estimates on a neighborhood-by-neighborhood basis are particularly useful in comparative studies.

Defining the neighborhood operationally is an important first step in conducting surveys on neighborhood phenomena. First, in comparative studies of neighborhoods, some sample of the population of neighborhoods must be obtained. Furthermore, the sampling units should be consistently defined so that between-neighborhood comparisons can be meaningfully interpreted. From our review of the literature on neighborhood quality, however, it is clear that there is no agreed-upon definition of neighborhood among various investigators.¹ The difficulty in defining a neighborhood conceptually has parallel implications for creating a sampling definition, i.e. a definition for the specific area encompassed by the neighborhood unit.

One consideration in defining the sampling unit is that it refers to a neighborhood concept that has some interpretive meaning. For example, in a study of local political processes (e.g., Guterbock, 1980; Rakove, 1975; Davidson, 1979) the definition of the neighborhood may be drawn along local political boundaries, such as the ward. Since the ward locale is the focus of local political concerns and activities, it makes sense to organize a sample of neighborhoods in terms of wards. In other cases, traditional local definitions of the neighborhood may be appropriate. Thus, in ecological studies of neighborhoods in urban areas, "named" neighborhoods, with fairly well worked out boundaries are

¹See chapter II for an elaboration of this point.

often the designated sampling unit (as in studies by Kornblum, 1974; Suttles, 1968; and Zorbaugh, 1929). Of course, not all local areas have names, which makes this method somewhat awkward.

As a general rule, in large scale surveys it is usually not feasible to rely on highly localistic operational definitions of neighborhoods for several reasons. First, not all communities are segmented in terms of such local areas as named neighborhoods, wards, or administrative catchment areas. Second, even if locally known boundaries exist, not all local definitions have meaning as a neighborhood to persons who live there. In some areas, for example, a political unit such as a ward may represent a meaningful social entity; but in other areas, a ward may be viewed by residents as encompassing many different neighborhoods. Finally, while generating local definitions of neighborhoods may have some conceptual validity in the sense that residents share common conditions, attitudes, and behaviors, in practice the designation of neighborhood units according to localistic criteria would be extremely time-consuming, require continuous updating, and even then, would not necessarily be accurate.

These problems with local definitions of neighborhoods lead us to suggest using a more consistent neighborhood referent in studies of neighborhood quality. As discussed more fully in Chapters II and VI, our approach relies on the general concept of the "micro-neighborhood," a relatively small area of contiguous dwelling units, typically clustered on a block face. The use of micro-neighborhood units is appropriate for comparative studies where a large collection of heterogeneous neighborhoods is being assessed. Furthermore, there are existing data sets based on micro-neighborhood samples against which the newer samples can be compared, a decided advantage in the interpretation

of data. But for small studies in one community or studies of one neighborhood only, a more localistic definition may be feasible and the investigator should make that judgment on a study by study basis.

To summarize, studies of neighborhood quality require that the investigator define operationally the neighborhood unit in order to implement a sampling plan. The need for an operational definition is two-fold: first, such a definition allows the investigator to give a substantive interpretation to the kind of local area which he or she is studying; and second, such a definition allows for sub-sampling of elements (e.g. residents) within the neighborhood, which is the usual technique for obtaining data on neighborhoods.

Elements of Neighborhoods as the Sampling Unit. In spite of the fact that the goal of research may be to make inferences about the condition or status of the neighborhood as a global unit, it is usually the case that elements within the neighborhood supply the raw data for making those inferences. For example, we may wish to measure the economic status of an area, but to do so requires sampling households within the area and creating some economic index representative of the area as a whole. Similarly, we may wish to measure the type of housing, racial composition, voting behavior, social participation, conditions of streets, and so on.

To create representative indices of these neighborhood characteristics requires measuring elements within the neighborhood, such as households. Furthermore, the selection of neighborhood elements should be systematic so that estimates of neighborhood conditions are unbiased representations of what actually exists in an area. The need for systematic sampling within neighborhoods arises because not all elements

within a neighborhood are identical. Consider for example, the estimation of neighborhood income, defined as average household income. While it is the case that households within neighborhoods are more homogeneous with respect to income than a random sample of the population, it is still true that there is substantial within-neighborhood variation of this characteristic. Similarly, on a host of social, economic, and physical characteristics, there are enough within-neighborhood differences so that representative samples of elements within the neighborhood are necessary in order to construct composite variables.

In deciding which neighborhood element to sample, an investigator should refer to the concept being studied. For example, in estimating income, a suitable sampling element would be the household since household income, rather than income of individual household members is the concept common to policy analysis or to more basic models of neighborhood dynamics. To study the type of housing, one may sample detached dwelling units (rather than sample a population of dwelling units per se). Similarly, to study voting behavior, one may sample individual adult residents; to study social behavior, one may choose a sample of individual residents; to study the condition of streets, a sample of population blocks. The point is that different element populations may be more or less appropriate as a sampling frame, depending on the concept under investigation.

On the other hand, practical considerations enter into design decisions. Most surveys are omnibus studies of multiple conditions, and for these it is cost-efficient to sample from a single population of elements. Usually the element sampled is the individual resident,

through a two-stage selection process. One stage involves the selection of a sample of households: the second stage involves the selection of a single resident within each household. Thus, the typical survey of neighborhoods would rely on a sample of residents to provide information about themselves, their household, and specific neighborhood attributes.

Note that the designated sampling frame for neighborhood components is theoretically independent of which informant one uses and which aspects of neighborhoods are measured. For example, one could select a sample of streets but measure those streets by interviewing residents or street department personnel or civil engineers.

Non-sampling Considerations.

Sampling design is, at best, only half the story in generating data on neighborhood quality. Of equal concern is the measurement of neighborhood characteristics. The following discussion refers to a number of issues involving the design, administration, and analysis of instruments that measure neighborhood quality. Specific sections address the selection of observers, the types of data that can be used to characterize neighborhoods, the modes of observing neighborhoods, and special problems associated with the analysis of data on neighborhoods.

Designating the Observer. Neighborhoods can't "talk for themselves" so a researcher must use an informant to describe or evaluate area conditions. The kinds of informants typically used are: residents, special citizens (such as politicians, neighborhood social leaders), planners, public administrators, representatives of private institutions (banks, businesses, social services), or trained observers. We might also include special mechanical instruments (such as machinery for

measuring air pollution or counting traffic) as a type of "informant".

In selecting which type of informant to use, consideration must be given to the degree to which the informant is appropriately knowledgeable about the data the investigator wishes to obtain. For example, a resident probably knows much more about social mores in an area than does an outside observer, so that data on social climate are best obtained from people who live in the area. Given what we know about the inaccuracy of self-reported voting behavior, voting records are probably better sources of data than residents on whether a resident voted in the last election. Similarly, instruments for measuring air pollution levels provide more accurate and precise descriptions than residents or other informants.

In previous studies of neighborhood quality, the most common type of informant has been the resident. This is partly a function of how most investigators conceptualize quality, e.g., as a subjective judgment about the goodness or desirability of the neighborhood, with the ultimate standard of judgment residing in those who live in the area. In addition, residents are convenient informants, particularly for omnibus surveys. Residents are relatively accessible and, for the most part, informed about a large number of neighborhood conditions.

In some cases, however, persons other than residents have been used as informants (for example, urban planners or students). In using sources of information other than the resident to evaluate neighborhoods and their attributes, the risk is that residents' views will not always correspond to the views of others; indeed, the lack of correspondence is more generally the rule than not (Lansing and Marans, 1969; Troy, 1971). There is no special solution to resolve the differences among observers;

presumably those differences stem from the standards of judgments that underlie reported statements about neighborhood quality. Little is known, however, about the judgmental basis for the differences in perspectives, although we may speculate that professional judgments are more concerned with the particular disciplinary perspective, whereas residential judgments are more heterogeneous in nature.

Designating the Object of Measurement. Any measurement procedure has an "object," i.e. a designated unit of observation about which some characteristic or attribute is assessed. In many studies of neighborhood quality, the object of measurement -- the neighborhood -- is not explicitly defined for respondents. In such studies, an individual's description or assessment of one or more neighborhood attributes (crime, transportation, shopping, housing, noise) is asked for without defining what the neighborhood area encompasses. Thus a respondent answers questions holding in mind his or her own private image of the area defined by the term "neighborhood".

The difficulty with instrumentation in which the concept of neighborhood is not defined operationally becomes clear if we consider the possible uses of such data. Suppose we wished to use survey data to plan programmatic interventions in neighborhoods. Without knowing what referent a respondent has in mind when he or she answers questions about "the" neighborhood, we cannot identify and make decisions about which specific areas require program intervention. We can, of course, make some guesses about what area a resident refers to when he or she evaluates either the overall quality of a neighborhood or some set of neighborhood attributes. We may, for example, assume that the respondent is referring to his or her block, or to his or her block-face.

But such assumptions are difficult to justify, given what we have shown earlier about variation in neighborhood "mental maps."

For some analytic purposes, the absence of a defined neighborhood unit about which data are obtained, is tolerable. For example, if we wanted to use the Annual Housing Survey to monitor changes in levels of citizens' satisfaction with their neighborhood, or to compare differences in satisfaction with the neighborhood among segments of the population, then the definition of the neighborhood unit would not be a central task. In these instances, we would be concerned with temporal or subpopulation differences among individuals.

We would be concerned, however, with the definition of neighborhoods where we are interested in differences in a population of neighborhoods--e.g., with monitoring changes in neighborhoods over time. If such a unit is left undefined, then inferences about between-neighborhood differences are difficult to make. Let us assume, for example, that we use survey data from individuals who are asked questions about their "neighborhood", where there is no operational definition for the idea of the neighborhood. Since we do not know what the unit of observation is for the individual informant, we don't know if observed differences between neighborhoods (e.g., some neighborhoods are friendlier than others), are due to actual differences in the neighborhood itself, or to differences in the "mental maps" or areal unit used by respondents. For example, in a study of neighborhood satisfaction over time, Carp (1975), attributes differences in satisfaction to changes in the respondents' definition of the neighborhood.

While specification of a neighborhood definition is frequently desirable for analytic purposes, it is also true that the concept of a neighborhood does not have any standardized geographical referent, but

rather implies different sorts of maps depending on who uses the term.² The absence of a standard definition means that observation should be specified for respondents in the survey instrument and furthermore, that unit should have some conceptual or practical justification. If the unit of observation is not specified by the investigator but is left "open-ended," as is the case in much survey research, then some thought has to be given to the meaning of responses about "the neighborhood," i.e., what unit of observation respondents have in mind when answering questions about their neighborhood.

In general, we believe that the inferences about neighborhood characteristics are not always straightforward in part because the object of measurement in survey instruments is frequently ambiguous. Nevertheless, in order to conduct comparative studies of neighborhoods, we need to define a consistent spatial unit on which to hinge a variety of measurement procedures.

Objects of Measurement and Units of Analysis. In survey research on neighborhoods, there are commonly two objects of measurement: characteristics of residents and characteristics of the environment. Included under environmental characteristics are data on dwelling units, physical conditions, services, and location, as well as overall assessments of the area. Aspects of residents that are most commonly measured are background characteristics, their attitudes toward the neighborhood, and their behaviors associated with living in the neighborhood.

We should note that because an object--such as the resident--is the focus of measurement does not mean that the same object is the unit of

² See Chapter II for an elaboration of this point.

analysis. Some characteristics that we analyze at the neighborhood level are actually operationalized by measuring elements within the neighborhood. For example, investigators often work with the concept of a high-income neighborhood. Here, a neighborhood's income level is determined by measuring the income of individual households within the area and then creating a statistic representing the wealth of the area, (e.g., average household income or median household income).

Generally, when characteristics of individual residents are measured (such as demographic characteristics or attitudes toward neighborhood conditions), the data can be analyzed at two different levels depending on the purposes of the research and on the sample design. On the one hand, analyses can use the resident as the unit of analysis--as in models of individual satisfaction with the neighborhood where such background characteristics as race and income are hypothesized to influence an individual's standards of judgment and thus the individual's level of satisfaction with an area. On the other hand, data on individual residents can be aggregated to create a variable indicating an overall neighborhood characteristic, such as the neighborhood's income level or neighborhood opinion about quality. Here, the variable based on aggregating within-neighborhood responses is taken as a characteristic of the neighborhood as a whole and used in research where the neighborhood is the unit of analysis.³

Note that measures of both the neighborhood and of individual residents can be obtained from a survey in which individuals supply information about themselves as well as information about the neighborhood. Thus, even though we may collect data from individual re-

³See for example, Bielby's (1979) study of neighborhood quality.

spondents, we can also obtain, through a number of operations, measures of neighborhood characteristics. As Merton (1950: p.14) observed:

In the last analysis, the data of sociology and social psychology are of course provided by records of the behavior or the statements of individuals. Sometimes, this fact is lost to view. Whether it is the data recorded in governmental censuses, the observation of small groups in a laboratory, or the reports by informants in field work, the data originate in the behavior and verbalization of individuals. But although in one form or another the data are obtained from individuals, they need not invariably be about individuals.

In sum, survey analyses of data on neighborhoods have often treated the object of measurement and the unit of analysis as if they were one and the same. As a result, references about neighborhood characteristics are sometimes drawn from data that more properly refer to individual level characteristics. A researcher must keep in mind the distinction between what unit is observed and what unit is being analyzed when reaching conclusions about the quality of neighborhoods.

Types of Data on Neighborhood Quality: Global Measures. Historically, the most common means of measuring neighborhood quality has been to use a single measure that is interpreted as summarizing the general level of a neighborhood's quality. Typically, the summary measure refers to one of the four global perspectives on neighborhoods discussed in Chapter III: health, housing condition, market value of housing, and resident's evaluations and experiences. Measures of health and housing condition and value are viewed as "objective" indicators of neighborhood quality because the data reflect "facts" about an area. In contrast, resident's evaluations of experiences are considered to be "subjective" measures because they reflect the opinions of residents or other observers rather than facts.

As we noted in Chapter IV, objective indicators are frequently collated from existing archives or records for reasons of efficiency. For example, local administrative record systems may provide indicators of housing value or health in an area. The use of evaluative indicators on the other hand, is associated largely with the survey mode of research since opinion data must be measured directly from sampled individuals and is not usually obtained as a by-product of other data-gathering systems.

In assessing the worth of single-indicator measurement, a primary issue is one of measurement validity: to what extent does the measure represent the idea of neighborhood quality? A basic assumption in using a single measure of neighborhood quality is that it "captures" all of the factors that pertain to the concept of quality. For example, consider the use of a housing market value as a measure of neighborhood quality. The assumption is that the average value of a neighborhood's homes is indicative of many areal characteristics; so that the greater the average value, the more desirable is the neighborhood on a number of dimensions that define neighborhood quality. One problem with such an assumption is that within-neighborhood values may be so variable, due to factors not necessarily indicative of neighborhood quality, that the average house value is not a validly interpretable statistic. Take the case of one urban neighborhood--which has a mixture of old and new housing, and of large and small townhouses--compared to another neighborhood in the city--which may have homes built completely after World War II, and only large single-family dwelling units. The former area is likely to have a lower average housing market value, yet the variety in the older neighborhood may well make it a more attractive and more

desirable place to live.

Generally, the validity of a single measure is limited by the extent to which any one aspect of a neighborhood--and the measurement of that aspect--adequately reflects the multi-facted notion of neighborhood quality. To the extent that a single measure--such as the housing market value--is correlated with other social, locational, and physical characteristics, then the single indicator may be a very efficient and valid measure of neighborhood quality. Empirically, however, none of the single indicators typically used overlap highly with all dimensions of neighborhoods that are taken to define quality. Thus, relying on a single measure can lead investigators to reach biased conclusions about which neighborhoods are of higher or lower quality.

The exception to this statement is, perhaps, the use of a single global evaluative measure. Here too, however, there are a number of other issues that make us uncomfortable with advocating their use. However, before discussing the utility of summary evaluative measures, it is worthwhile to recap our earlier discussion of these measures.

Usually a summary measure is based on one of the following concepts: the resident's satisfaction with the neighborhood; the extent to which the resident likes the neighborhood; the resident's rating of the neighborhood's "excellence;" or the extent to which the neighborhood fits the resident's ideal image of a desirable neighborhood. Examples of these measures are presented in Appendix A.

We view the use of such summary measures in assessing neighborhood quality with some equivocation. The intent of a single global measure is to provide an efficient means of making between-neighborhood comparisons, as in cross-sectional comparisons of different neighborhoods or cross-temporal comparisons of the same neighborhood over time.

There are a number of problems, however, associated with the use of summary measures which bear on the interpretation and validity of the data.

One common problem with single indicator measurement is low reliability. Low reliability means that the measure might be inconsistent in its behavior and thus subject to misclassification errors. With single indicator measurement, it is more likely that the level of quality ascribed to the neighborhood would be different upon repeated measurement. For example, a respondent may judge his or her neighborhood to be of "good" quality but, upon remeasurement, say that the neighborhood is of "excellent" quality. Since the judgment about level of quality is based on a single survey question, in theory, those judgments are more likely to be "bouncy" or unreliable.

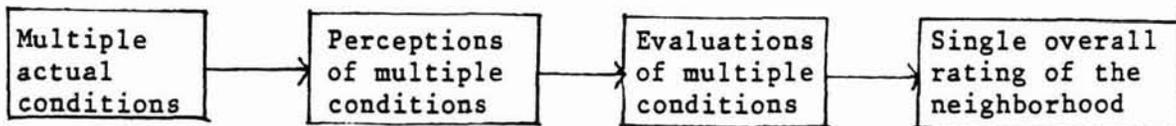
In our view, however, lack of reliability is not the major problem of single indicator measurement. This is because, in practice, single measures of neighborhood quality are formatted in terms of only a few response categories (usually three to seven in number) and response distributions are highly skewed.

In most cases of single variable measurement, from 60 percent to 80 percent of the sample fall into the two most positive categories. There are a number of possible explanations, both substantive and methodological for the relative implacability of response distributions. The net effect, however, is that single indicator measures are remarkably stable over time and among sub-groups.

The high degree of response consistency--at least in the aggregate--makes the issue of reliability in measure of neighborhood quality somewhat moot. However, the skewed nature of the response consistency

raises a problem for analysis: measures do not have the response variability that is desirable in data analyses where relationships among variables are assessed. This is a particularly important problem given the fact that so many of the relational analyses found in the empirical literature are based on the general linear model (e.g., multiple regression) which assumes a different type of response distribution than that ordinarily found in measures of neighborhood quality.

This last point leads to a second problem with single indicator measurement--the fact that questions and responses are at such an abstract level of meaning that an investigator has minimal guidance as to the interpretation of the data. Even a simplified version of the model presented in Chapter III illustrates the dilemma.



Many objective and subjective factors enter into the final judgment of a neighborhood's quality, and variation in any of the preceding steps may cause variation in the global measure of neighborhood quality. For example, two persons in the same neighborhood may give that neighborhood a rating of "excellent". In one case, the rating occurs because the resident has not perceived the poor street conditions, absence of greenery, and fear of crime. In the second case, the resident perceives these conditions, but does not consider them essential to a judgment of high quality. In both cases, a rating of excellent was given, but for different reasons. Furthermore, other observers may give this neighbor-

hood different overall ratings depending on the actual conditions and his or her perceptual and evaluative processes.

Without measuring specific aspects of the neighborhood it is virtually impossible to understand the meaning of single indicator measures. Moreover, the use of global measures can have an inherently status quo bias in their implications for public policy. This is because very large proportions of people give positive evaluations on global measures of neighborhood quality. Nevertheless, with more refined measurement, we usually observe significant variation between evaluations of specific conditions in a neighborhood. Only through measuring specific attributes of neighborhoods can we begin to understand the nature of neighborhood quality and what levels of quality are associated with various kinds of areas.

Types of Data: Measures of Neighborhood Characteristics. Aside from the overall or global quality of neighborhoods, we have seen that many characteristics of neighborhoods can also be measured. In terms of their content, these characteristics fall into four categories representing physical environmental conditions, locational characteristics, services and facilities, and the sociocultural environment. The rationale for measuring these categories has been discussed in Chapter III. Here we will discuss the types of data about neighborhood characteristics that an investigator may generate, and the advantages and disadvantages of each type.

In reviewing hundreds of studies on neighborhood quality, we have found that survey researchers have used many types of measures to examine the characteristics of a neighborhood. By type of measure we are not referring to the nature of these characteristics, but rather, to

the particular perspective on neighborhood conditions that is embodied in the survey questions. In these terms, the major types of measures are often dichotomized as descriptions or descriptive perceptions of current conditions vs. evaluative assessments of current or ideal conditions. This dichotomy parallels the distinction--raised earlier--between objective data (descriptions or perceptions) and subjective data (evaluations or preferences), i.e. between observations of conditions and judgments about neighborhood conditions.

Virtually any neighborhood characteristic may be measured either objectively or subjectively. Consider, for example, the concept of "density." An observer (such as a census taker) may count the number of residents in a neighborhood and, knowing its size, calculate a density measure. This would be considered an objective measure, since the procedures for conducting a count of residents and measuring the area can be specified in advance. Similarly, data obtained through highly explicit and standardized recording procedures (such as physical measures of air quality) are also considered to be objective.

On the other hand, asking a question such as "Is this neighborhood crowded?", is considered to be a subjective measure, since informants' responses will vary--even within the same neighborhood--according to their standards of judging and evaluating density. In essence, procedures for evaluating neighborhood conditions are internal to each informant and thus subject to much inter-rater variability.

Most surveys of neighborhood quality have emphasized the use of subjective measures, either by themselves or on rare occasion in conjunction with objective measures of the same conditions. This is because objective measures alone are difficult to interpret with regard to neighborhood quality. Generally, without some notion of how a con-

dition is experienced among the residents, it is unwise to interpret its bearing on the general quality of the neighborhood.

The social indicator literature abounds with distinctions between objective and subjective indicators and the degree to which a researcher can use either type to reach valid conclusions about the status of the quality-of-life domains (Schneider, 1976; Land, 1975; Andrews, 1981). Our own perspective is that the distinction between objective and subjective survey data is often difficult to justify, especially considering the means by which such data are generated.

In our view, measures are best thought of as relatively objective or relatively subjective, since even some so-called "objective" measures have an element of subjectivity or variation due to factors associated with the measurement process. The following sections, focus in more detail on strategies for descriptive and evaluative measurement, and elaborate on this point.

Descriptions of Neighborhood Conditions. As we noted in Chapter IV, commonly measured descriptions include data on the presence of various conditions, as well as data on amounts, distances, and frequencies. For example, survey respondents may be asked whether their streets are paved, how many grocery stores exist in the area, how far the neighborhood is from the central shopping district, how frequently garbage is collected, and so on. Descriptive data are most easily obtained when the object of measurement is clearly defined (e.g., the dwelling unit, the block face, the individual resident), when the characteristic can be readily observed (e.g. park space), and when there are no cognitive or other barriers to accurate reporting.

In our opinion, however, very few descriptions of neighborhood phenomena fulfill these criteria, particularly since reports of neighborhood conditions are usually supplied by lay informants (such as residents), who vary in their powers of observation and in their abilities to translate what they observe into verbal reports. As a result, many survey items give the appearance of generating descriptive data, but are actually generating data that have evaluative or subjective components. This is the case, for example, with virtually all of the reviewed measures of social conditions, where sampled residents are asked to report about the social characteristics of their neighborhood. Some examples will illustrate the difficulty.

"How often do you talk to any of the half dozen families who live closest to you just to chat or for a social visit--would it be every day, several times a week, once a week, 2-3 times a month, once a month, a few times a year, or never?" (Lansing et al., 1970)

"How many people in this neighborhood would you say share your ethnic background--nearly everyone, most people, some people, or few or none?" (Fried, 1973)

"Are most of the people in this neighborhood financially better off, worse off, or about the same as you?" (Butler, et al., 1970)

"Would you say that in general people in this neighborhood are very active, moderately active, or not too active in community affairs?" (Bradburn, et al., 1970)

"How does this part of town compare with other areas of this city? Would you say that crime in this area is higher than in other areas, lower, or about the same?" (Atkinson, 1979)

These questions are subjective for several reasons. The first question--about interaction with one's neighbors--is objective insofar as a resident perceives and reports accurately his or her neighborly interactions. This question has a subjective component, however, since the phrase "live closest to you" is not concretely defined but left open to interpretation.

The other questions--on social mix, social participation, and crime--are even more subjective in nature for several reasons. First, they assume a level of knowledge about area residents that many respondents may not have. For example, unless a resident knows his or her neighbor very well, it is difficult to make comparative judgments about the neighbor's financial status; and a resident is not likely to know more than a few neighbors, if any, well enough to make evaluations of relative economic status. Second, the questions embody concepts that are open to interpretation and are therefore likely to be responded to in different ways. For example, the phrase, "ethnic background" may refer to religion, race, or country of origin. In an all white neighborhood, one resident may report that everyone is of the same ethnic background; another resident, thinking in terms of country of origin, may give a different response. Third, the response categories are also open to interpretation. For example, how "active" is "very active" in community affairs? One respondent's standard of activity level may be quite different from that of another respondent.

Questions that ask residents to inform about actual conditions in a neighborhood are frequently difficult to treat as descriptive. Upon close analysis, such questions can be seen to reflect the resident's opinion as much as the actual state of affairs and should be treated as such. A question about social mix, for example, may be used as an indicator of whether a resident believes he or she fits into the area, but such questions are not valid substitutes for more precise measures of actual social or income variation among residents. Generally, to measure actual conditions depends on directly sampling the variable of interest using the proper sampling unit. Thus, if an investigator is

interested in obtaining data on social mix, he or she should have an adequate within-neighborhood sample of households to do so.

In conceptual domains other than social characteristics, a similar caution is warranted. Residents' perceptions and reports about the physical environment, about location, and about services can be highly influenced by various personal factors (e.g., location in the neighborhood, life-style, use of services). Thus, the reports of a single resident or even a few residents in a neighborhood may be highly unreliable if they are taken as indicators of actual neighborhood conditions. Whether a resident is a reliable informant must be judged on a variable by variable basis and in terms of the knowledge and perceptual competence that the resident is likely to have.

Evaluations of Neighborhood Conditions. Even with the collection of relatively descriptive data about neighborhoods, the researcher still faces the issue of how to interpret the data with regard to neighborhood quality. This is because the actual conditions in an area do not have a one-to-one correspondence with the assessed quality of an area. For example, it is not always true that the presence of what an investigator assumes to be a negative characteristic, is experienced by residents as detracting from the quality of the neighborhood. For example, neighborhoods that have high crime levels--as measured through independent reporting systems--are not always those neighborhoods that residents judge to be of poor quality (Lee and Marans, 1980). Similarly, neighborhoods with lower-quality housing are not necessarily those judged to be of poorer quality.

The lack of correspondence between the actual state of affairs and the evaluated state of affairs is common in many areas of social life.

Several investigators have made the point that the same actual (or objective) conditions are experienced and evaluated differently by various individuals (e.g., Schneider, 1975; Andrews, 1947; Appleyard, 1976) and that residential evaluations of conditions are much more related to measures of neighborhood quality (Lansing, et al., 1970; Zehner and Chapin, 1974; Marans and Rodgers, 1975; Hall and Ring, 1974). Appleyard, for example, in a discussion of the measurement of traffic rates says that while traditional measures of street and traffic conditions may be quite sophisticated, they also "may have nothing to do with what is on residents' minds." (Appleyard, 1976,). Thus, while Appleyard was able to show a basic congruence between actual levels of traffic flow in San Francisco and residents' dissatisfaction with their streets, there were a number of situations in which residents living on streets with similar traffic patterns voiced very different levels of concern. Because of the range in vulnerability and behavioral response to traffic conditions, objective measures of traffic flow need to be supplemented with measures of residents' behavior, perceptions, and attitudes.

Generally, evaluations of neighborhood characteristics may be used for several purposes. First, since neighborhood interventions are generally planned and implemented around specific conditions (e.g., streets, greenery, housing), evaluations of specific conditions can be used to plan and monitor neighborhood change. Second, and more basic, measures of specific conditions allow an empirical understanding of the concept of neighborhood quality. Thus, in much of the research on neighborhood quality a major goal has been to define on an empirical basis--rather than an intuitive or judgmental basis--the important components of a neighborhood with respect to levels of quality. Here

too, evaluations of specific conditions in a neighborhood may be used in planning interventions, in monitoring neighborhood change, or in comparing neighborhoods with regard to the level and structure of neighborhood quality.

Among the concepts that investigators have used to evaluate neighborhood conditions are satisfaction with a condition, preference for a condition, level of excellence ascribed to a condition, and comparison of the neighborhood with some other real or ideal neighborhood. Whatever the underlying concept, it bears repeating that evaluations are subjective ratings by sampled individuals. Just as evaluations of the neighborhood as a whole are dependent on factors other than the state of actual conditions, so evaluations of specific conditions are not always correlated with objective ratings of those conditions. Furthermore, the perspective of the observer has proven to be an important factor in observed evaluations, as demonstrated in work by Michelson (1977), Hartman (1963), Buttimer (1972), Cooper, (1975), and others.

With regard to the selection of actual survey items for the evaluation of neighborhood conditions, two points warrant mention. First, an evaluation item may be global or focused in its referent. For example, compare these two questions:

"How would you rate the nearest health center in the area?
Would you say it is excellent, good, fair, or poor?"

"How convenient is the location of the nearest health center?
Is it very convenient, fairly convenient, or not at all convenient?"

The first question uses the concept of quality in order to obtain a general rating of a specific aspect of the neighborhood--the health center. The second question, on the other hand, evaluates one aspect of the health center--its location. Because the latter question is more

narrow in its focus, it is perhaps best suited to a detailed study of the quality of health service. Generally, questions that evaluate specific aspects of a neighborhood condition are not as useful to omnibus surveys of neighborhood quality as questions that have a more general referent.

Second, a researcher should be alert to the possibility of a response set on the part of the respondent (see, for example, Zehner and Chapin, 1974; Campbell, Converse, and Rodgers, 1976). This occurs when respondents attempt to be internally consistent in their replies and thus give a similar rating to all the measured attributes. Sets of questions can be designed to guard against this type of response effect, for example, by unclustering attribute ratings throughout a questionnaire, by randomly inverting response scales, by reminding respondents that the interviewer is discussing distinct characteristics, and by using more than one evaluative dimension among a set of questions.

Mode of Observation. A final consideration in designing survey research on neighborhood quality is the mode of observation, i.e. the general method of obtaining data on neighborhood quality. As noted in Chapter IV, three general modes of observation about neighborhoods³ used in the empirical literature. By far, the most common mode is through verbal reports by informants within the context of the survey interview. The second mode involves the presentation of perceptual stimuli (e.g., tape recordings, photographs) about which the informant makes a judgment with the neighborhood being studied (Wilson, 1962; Cooper, 1975; Hoinville, 1974; Peterson, 1967). The third mode of observation uses trained field workers who rate aspects of the neighborhood, usually according to pre-designated criteria (Lansing and Marans, 1969; Kaiser, et al., 1970) but

not always (Troy, 1971). Since much of the rest of this chapter has focused on an analysis of verbal report data, here we will discuss only methods that depend on perceptual stimuli or trained observers.

Perceptual stimuli are used to gain a more concrete understanding of the preferences that people have for different neighborhood conditions. Perceptual stimuli are not common in neighborhood research, but when this method is used, it is usually incorporated into some form of a "trade-off" game or technique for assessing revealed preferences. Wilson (1962), for example, used photographs and models to illustrate levels of density possible on a block and asked respondents to choose their preferred level. Another variation of this approach is to have respondents evaluate various aspects of a neighborhood presented in photographs in order to gauge the relative importance of neighborhood characteristics. One refinement is to have the evaluations made in the context of a mock "budget," which the respondent can use to "buy" his or her desired neighborhood characteristics (see for example, Hoinville, 1974).

Methodologically, the presumed advantage of using perceptual stimuli is that each respondent has in mind the identical image of a neighborhood condition (such as noise level or density) when making assessments of neighborhood conditions. This avoids the problems of trying to describe a condition in verbal terms; or, as is so often the case, of omitting any concrete definition of a neighborhood condition in the measurement instrument. The use of perceptual stimuli thus may eliminate a potential source of measurement error: between-subject variation in defining response categories (e.g. defining what a "low" level of noise is).

Since relatively few studies have incorporated the use of perceptual stimuli, it is premature to judge the utility of this approach. Particularly needed are studies that relate the preferences measured in laboratory studies to preferences revealed in "real world" behavior. It may be the case, for example, that the choices made by respondents in the artificial circumstances of an experimental setting may not correspond to the choices made by people in natural settings.

With respect to using trained observers, we find that relatively few surveys capitalize on this mode of observation. From our own experience in working with such data, and from anecdotal evidence of other investigators, it appears that systematic measurement using trained observers is more suitable for describing neighborhood conditions than for making qualitative judgments about the neighborhood. This is largely because of the difficulty in specifying the criteria or standards of judgment to be used by field workers. For example, it may be feasible to train field workers to take accurate and reliable counts of various neighborhood conditions (e.g., number of dwelling units per block, number of street lights). It is more complicated, however, to develop detailed specifications for rating conditions (e.g., the level of cleanliness, the amount of noise) and also, to train field workers to use those specifications. The efforts needed both to develop standardized methods for field observation and to ensure reliable administration of those methods are substantial impediments to the widespread use of observer ratings in studies of neighborhood quality.

Summary

When we speak of the "neighborhood quality" we mean an overall assessment of the neighborhood's desirability as a place to live--its

caliber or degree of excellence. That said, it is clear from our review that there are many different ways of measuring neighborhood quality. In this chapter we have attempted to raise a number of methodological issues that are not commonly addressed either in substantive reports or in methodological discussions of research on neighborhoods. Indeed, the empirical literature has paid much more attention to substantive interpretation of the data than to the methodological adequacy of procedures for generating data.

We have no doubt raised more questions than we have answered, but this is not unexpected, since we deliberately concentrated on more complex aspects of survey research design. It is our hope, however, that the issues raised will be considered by designers of research as well as by consumers of such studies, and that this chapter provides at least a provocative, if not definitive discussion of measurement strategies.

CHAPTER VI

STUDYING NEIGHBORHOOD QUALITY WITH ANNUAL HOUSING SURVEY DATA

The preceding chapters have reviewed and synthesized the state of knowledge regarding neighborhood quality and the methodological issues involved in conducting research on neighborhoods. Within these chapters, we deliberately generalized across numerous studies in order to document what knowledge currently exists and what methodological improvements need to be made in research on neighborhoods.

In this chapter, we continue our methodological analysis by focusing on a specific vehicle for studying neighborhood quality--the Annual Housing Survey (AHS) conducted by the Bureau of the Census under sponsorship of the U.S. Department of Housing and Urban Development. This multi-million dollar survey of American dwelling units contains, as one of its substantive components, a section on neighborhood phenomena. In many respects, the AHS follows standard procedures for surveying local areas. We therefore present it as a "case study" to illustrate the strengths and weaknesses of what a survey, in practice, can accomplish. As part of the case study analysis, we discuss whether the methodological techniques that make up the AHS's design are adequate for a study of neighborhood quality and other neighborhood phenomena.

On the pages which follow, we discuss the purposes of the AHS and then examine its potential for yielding reliable and valid data on neighborhoods. Finally, where we feel the present design limits ability to study neighborhood quality adequately and comprehensively, we suggest possible changes so as to overcome these limitations.

Current Design of the Annual Housing Survey

The Annual Housing Survey is conceived as a tool with which policy makers can monitor the quality of residential environments throughout the U.S. and thereby facilitate the national goal of providing "a decent home and suitable living environment for every American family (Department of Commerce, 1979). In practice, the AHS is two parallel surveys, one a sample of dwelling units from the national population and the second a sample of dwelling units in selected Standard Metropolitan Statistical Areas. Our discussion refers to the national survey, but since the two surveys have basically the same questionnaire content and some of the same sampling features, many of the points we make will also apply to the SMSA Surveys.

The AHS has been conducted annually since 1973. In the Fall of each year, data on housing characteristics, occupant characteristics and related environmental characteristics are collected in a personal interview with one adult informant from each sampled dwelling unit. Wherever possible, the design consists of repeated measures on the same dwelling units. The core material in the survey instrument is the same across successive years and housing units only fall in or out of the sample due to natural processes of growth and decay (such as the development of new housing units or the destruction of old units). Thus, the AHS is a panel study of dwelling units, designed to represent the housing population of the United States (and subgroups of that population) in any single year and also to monitor the history of the housing unit population (and sub-groups) over time.

While the AHS takes the "residential environment" as its substantive focus, most of the questionnaire focuses on the sampled

dwelling unit and its adjacent environs, that is, the lot on which the housing unit is placed and the area fanning out in front and to the sides of the dwelling unit plot. Nonetheless, two pages of the questionnaire consider another important component of the residential environment, the "neighborhood" and several of its attributes or components.

The sampling design of the AHS reflects its dominant concern with the housing unit. A national probability sample of dwelling units is drawn with one respondent informing on each selected DU. In order to make efficient estimates of dwelling unit characteristics the clustering of sampled households is held to a minimum. Within any selected enumeration district, data are collected at two or four households, typically, data are available for two adjacent households (U.S.G.P.O., 1978).

Figure 1 reproduces that section on the AHS questionnaire that refers to the respondent's neighborhood (Bureau of Census, 1976). In these questions, no operational definition of the term "neighborhood" is given to the respondent, each individual responds to the neighborhood questions according to his/her image of what constitutes the neighborhood. The section begins with a series of questions on physical conditions. Here, the respondent indicates whether any of the following 12 conditions are present on their streets: street noise, heavy traffic, streets in need of repair, impassable roads, poor lighting, neighborhood crime, trash, abandoned structures, rundown housing, business activities, pollutants, and airplane noise. For the conditions which are present, the respondent is then asked whether or not they are bothersome. Additional questions are asked about the adequacy of

neighborhood services, specifically, whether the respondent thinks he or she has "adequate or satisfactory" public transportation, schools, shopping, police protection, fire protection and health clinics.

An interesting aspect of the questions on conditions and services is the attempt to measure the intensity of a resident's feelings. If a resident finds a specific condition bothersome or inadequate, he or she is then asked whether the condition is objectionable enough that he or she "would like to move from the neighborhood."

In addition to the specific assessments, respondents also make two global evaluations, one for the neighborhood as a place to live and the other rating his or her house as a place to live. For these evaluations or ratings, the respondent chooses one of four responses: excellent, good, fair, or poor. A final item in this section of the questionnaire is completed by the interviewer, who indicates whether he or she observes any abandoned buildings on the resident's street.

In the sections that follow we discuss the current design for sampling and instrumentation in terms of the AHS's capacity for monitoring the quality of American neighborhoods. Based on our knowledge of policy issues and the literature on neighborhoods, we have organized our discussion around four topics. These are: the ability of the Annual Housing Survey to focus on neighborhoods as a unit of analysis, the substantive content of data on neighborhoods, the use of interviewer and respondent data to obtain information about neighborhoods, and the use of single questions as indicators of neighborhood quality.

Figure VI-I

Neighborhood Questions - Annual Housing Survey Questionnaire - 1976

Section III B - OCCUPIED UNITS (Includes URE) - Continued		
101a. Were offstreet parking facilities available in connection with the building?	200	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No - Skip to 101e
b. Did ... (you) (head) rent such a space?	209	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No or available at no extra charge - Skip to 101e
c. What was the MONTHLY cost for that parking space?	210	\$ _____ 40
d. Was the cost of the parking space included in the \$... (rent entered in 95), or did ... (you) (head) pay for it separately?	211	1 <input type="checkbox"/> Included in rent } Skip to 102a 2 <input type="checkbox"/> Separately ... }
e. Did ... (you) (head) rent a parking space in the neighborhood other than that connected with the building?	212	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
NOTE - Ask all categories in 102a before proceeding to 102b.		
102a. The following questions are concerned with different aspects of your PRESENT neighborhood. Here is a list of conditions which many people have on their streets. Which, if any, do you have?		
(1) Street or highway noise? ...	213	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
(2) Heavy traffic? ...	214	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
(3) Streets or roads continually in need of repair, or open ditches? ...	215	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
(4) Roads impassable due to snow, water, etc.? ...	216	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
(5) Poor street lighting? ...	217	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
(6) Neighborhood crime? ...	218	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
(7) Trash, litter, or junk in the streets (roads), or on empty lots, or on properties in this neighborhood? ...	219	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
(8) Boarded-up or abandoned structures? ...	220	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
(9) Occupied housing in rundown condition? ...	221	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
(10) Industries, businesses, stores, or other nonresidential activities? ...	222	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
(11) Odors, smoke, or gas? ...	223	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
(12) Noise from airplane traffic? ...	224	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No
NOTE - If "Yes" was answered for one or more of the categories in 102a, ask 102b.		
102b. Does the (condition) bother you? c. Is it so objectionable that you would like to move from the neighborhood?		
(1) <input type="checkbox"/> Yes - Ask c <input type="checkbox"/> No	(2) <input type="checkbox"/> Yes - Ask c <input type="checkbox"/> No	(3) <input type="checkbox"/> Yes - Ask c <input type="checkbox"/> No
(4) <input type="checkbox"/> Yes - Ask c <input type="checkbox"/> No	(5) <input type="checkbox"/> Yes - Ask c <input type="checkbox"/> No	(6) <input type="checkbox"/> Yes - Ask c <input type="checkbox"/> No
(7) <input type="checkbox"/> Yes - Ask c <input type="checkbox"/> No	(8) <input type="checkbox"/> Yes - Ask c <input type="checkbox"/> No	(9) <input type="checkbox"/> Yes - Ask c <input type="checkbox"/> No
(10) <input type="checkbox"/> Yes - Ask c <input type="checkbox"/> No	(11) <input type="checkbox"/> Yes - Ask c <input type="checkbox"/> No	(12) <input type="checkbox"/> Yes - Ask c <input type="checkbox"/> No

Section III B - OCCUPIED UNITS (Includes URE) - Continued		
NOTE - Ask ALL categories in 103a before proceeding to 103b.		
103. The following questions are concerned with neighborhood services.		
a. Do you have adequate or satisfactory -		
(1) Public transportation? ...	225	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Don't know
(2) Schools? ...	227	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Don't know
(3) Neighborhood shopping such as grocery stores or drug stores? ...	229	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Don't know
(4) Police protection? ...	231	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Don't know
(5) Fire protection? ...	233	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Don't know
(6) Hospitals or health clinics? ...	235	1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No 3 <input type="checkbox"/> Don't know
NOTE - Ask 103b only for those categories in 103a which were answered "No."		
b. Is the (service) so inadequate or unsatisfactory that you would like to move from the neighborhood?		
(1) <input type="checkbox"/> Yes <input type="checkbox"/> No	(2) <input type="checkbox"/> Yes <input type="checkbox"/> No	(3) <input type="checkbox"/> Yes <input type="checkbox"/> No
(4) <input type="checkbox"/> Yes <input type="checkbox"/> No	(5) <input type="checkbox"/> Yes <input type="checkbox"/> No	(6) <input type="checkbox"/> Yes <input type="checkbox"/> No
(7) <input type="checkbox"/> Yes <input type="checkbox"/> No	(8) <input type="checkbox"/> Yes <input type="checkbox"/> No	(9) <input type="checkbox"/> Yes <input type="checkbox"/> No
NOTE - If "No" was answered for one or more categories in 103a, ask 103b.		
104a. In view of all the things we have talked about, how would you rate this NEIGHBORHOOD as a place to live - would you say it is excellent, good, fair or poor?		
237 1 <input type="checkbox"/> Excellent 2 <input type="checkbox"/> Good 3 <input type="checkbox"/> Fair 4 <input type="checkbox"/> Poor		
b. How would you rate this HOUSE (building) as a place to live - would you say it is excellent, good, fair or poor?		
238 1 <input type="checkbox"/> Excellent 2 <input type="checkbox"/> Good 3 <input type="checkbox"/> Fair 4 <input type="checkbox"/> Poor		
OBSERVATION		
105. Are there any buildings that appear to be abandoned and/or are there any buildings with windows broken or boarded-up on this street?		
239 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No		
CHECK ITEM U		
<input type="checkbox"/> URE Household (See item 7, page 1) - Ask 106 (See Control Card item 27a) <input type="checkbox"/> A one-unit structure, or a mobile home or trailer - Skip to 109 <input type="checkbox"/> Two-or-more-unit structure - Skip to 107a		

Drawing Inferences About Neighborhoods

In spite of the fact that the stated goal may be to make inferences about neighborhoods, not all social surveys addressing neighborhood quality issues result in data where the neighborhood is the unit of analysis. Indeed the confusion between the unit of analysis and the object of measurement is common in sample survey research on neighborhood quality.¹

For the Annual Housing Survey to be useful in making inferences about the quality of neighborhoods - rather than inferences about smaller or larger territorial units (such as dwellings or cities) or about individual residents - its design should allow neighborhoods to be the focus of analysis.

Important issues in the design of the AHS are: how the neighborhood is conceptualized, operationally defined and measured, and whether the data that are collected permit statements about conditions in neighborhoods that are independent of the observer (e.g., respondent) who makes those statements. These issues and their implications for understanding neighborhood quality are discussed below.

In relying the AHS data to indicate the quality of various conditions and services, the current format asks residents to evaluate aspects of their neighborhood by responding to questions in which the term "neighborhood" is not defined. Thus, the data consist of individuals' opinions about their neighborhood, but the respondent supplies his own definition for what that neighborhood is. Since research on cognitive maps shows considerable heterogeneity in mental

¹ The distinction between unit of analysis and object of measurement is discussed more fully in Chapter V.

maps of neighborhoods (e.g., Lee, 1968, Golledge and Zannaras, 1973; Marans, 1976), it is reasonable to assume that not all respondents on the AHS have the same sort of neighborhood in mind. It is also likely that respondents have multiple concepts of what the neighborhood is, that is, the public school neighborhood is different in size from the neighborhood affected by crime or the one subject to street noise. But even if we accept the premise that an individual's mental map may be consistent across all of the neighborhood item (i.e., in answering the questions on neighborhood conditions and services, an individual maintains that same mental map of the neighborhood throughout questioning), it is likely that there is great variation between respondents with respect to the neighborhood they have in mind when they answer questions about neighborhood conditions or services. Even people living in close proximity are likely to have different territorial maps of where their neighborhood lies in relation to the dwelling unit (although neighbors are more likely to have shared images than non-neighbors).

Not only does the AHS questionnaire not define the object of measurement - i.e., the "neighborhood" - but in the course of asking questions about neighborhood conditions and services, even the global referent changes. Thus, at the beginning of the section on neighborhoods (Question 102) the lead-in paragraph refers to the respondent's "PRESENT neighborhood". In the next sentence of this paragraph, the respondent is asked to think of conditions on his "street". At Question 103, the respondent is again reminded to think of "neighborhood services", and finally, the Question 105 - the interviewer's observation, the referent is "this street".

Because the idea of neighborhood is both undefined and changeable across items, there are several potential problems in using the resulting data as indicators reflecting conditions and quality of neighborhood services. First, there is likely to be a fair, albeit unknown degree of variation in the referent an individual respondent has in mind when answering questions about the neighborhood. As noted above, a respondent may have, for example, different images in mind as he moves from item to item, for example, his mental image of the neighborhood when he answers questions about neighborhood crime [Q. 102a (6)] may be different from his image when he answers questions about police protection [Q. 103a(4)]. These differences mean that any relational analyses (such as relating the presence of neighborhood crime to the adequacy of police protection in a neighborhood) may be misleading simply because of changes in referent (i.e., neighborhood dimensions) across items.

A second type of problem that is even more likely to occur is between-respondent variation in the interpretation of what the "neighborhood" is. One respondent's idea of what his neighborhood entails spatially may be entirely different from another respondent's idea. Because many respondents do not share the same mental maps of neighborhoods, between-respondent differences are not easy to evaluate. For example, do differences in responses to "heavy traffic" occur because two neighborhoods have different levels of traffic or do such responses differ because respondents vary in the spatial area which they consider in answering those questions? Without knowing whether respondents share a consistent definition for what the neighborhood is - and indeed, suspecting that they don't - it is hard to conclude that

differences in responses to questions about neighborhood conditions and services reflect differences about neighborhoods - rather than differences in mental maps.

In general, the difficulty with analyzing individual responses to a non-specific or changing notion of "neighborhood" arises if we wish to obtain knowledge about between-neighborhood differences, i.e., if we wish neighborhoods to be the unit of analysis. With few exceptions, e.g., Bielby, 1978, Scharf, 1978) the analysis of survey data in which individuals are the ultimate sampling unit persists in using the individual as the unit of analysis. Tabulations consist of the marginal responses of individuals to survey questions (e.g., Current Housing Reports) or of the multivariate structure of individual responses, using a global indicator of neighborhood quality as the dependent variable (e.g., Marans and Rodgers, 1975, Campbell, Converse, and Rodgers, 1976). Such analyses refer to the level or structure of individual responses, for example, the percentage of individuals who think their neighborhood is a good place to live, or the extent to which personal evaluations of neighborhood conditions explain an individual's level of satisfaction with his neighborhood. Technically, however, such analyses cannot be used to make inferences about neighborhood units, i.e., to answer such questions as whether the quality in one neighborhood is higher than in another, or whether the same bundle of neighborhood conditions that explain a neighborhood's quality generalizes to other neighborhoods.

While it is common in survey research on neighborhood quality to use individual opinion data for drawing inferences about the neighborhood as a whole, such an analytic strategy may be inappropriate if (1) we do not know what neighborhood the individual is referring to

(e.g., whether he means the three or four houses around his own dwelling unit, whether he means his block-group, whether he means his school district, etc.), and, (2) we suspect that any individual's statement about a neighborhood (e.g., his evaluations of specific neighborhood conditions and services) reflects as much about the respondent (his value system, his perceptual abilities, his behaviors, etc.) as it does about the actual neighborhood, and we cannot filter out those individual aspects.

Possibilities for Change in the Design of the Annual Housing Survey

In the pages which follow, we suggest several possibilities for changes in the Annual Housing Survey so as to expand the scope and focus the intent of that portion dealing with neighborhood quality issues. Possible changes are of two types: one deals with alterations in the survey instrument while the other modifies the sample design. If these changes or variations on them were implemented, we believe the potential of the Annual Housing Survey would be greatly enhanced for making between-neighborhood comparisons, either at one point in time (e.g., cross-sectional comparisons), or at multiple times (e.g., charting changes over time in one or more neighborhoods.)

Instrumentation. Changes in instrumentation are relatively easy to implement because their effects can be restricted narrowly to the topic of neighborhoods. However, the very ease in tinkering with a survey instrument in itself constitutes a danger, insofar as even seemingly small changes are likely to have unpredictable effects on the results. For example, it has been known that even small changes in the wording of a question are likely to alter the distribution of responses, although the nature of the alteration is usually not predictable in advance.

Similarly, changes in the wording of responses, in the mode of administration, in questionnaire format - all can cause "response effects". More generally, it is hard to tell how alterations in a questionnaire will work - whether the information one actually obtains is the information one wants to obtain. It is because there are so many unknowns in the outcome of questionnaire design - because the design of a questionnaire is still as much an art as a science - that we urge the implementation of any changes in the questionnaire only after extensive pilot study. By pilot study we do not mean simply an ordinary "pre-test" which is normally conducted as part of social surveys. Rather, we suggest that a pilot study entail pre-testing and systematic analysis of pre-test data in order to determine both the operational feasibility of the instruments and the analytical feasibility of the revisions.

Providing an Operational Definition of Neighborhood. With respect to using changes in instrumentation for clarifying the neighborhood as the unit of inference, we suggest that consideration be given to supplying within the context of the questionnaire an operational definition for what the term "neighborhood" means. An alternative approach would be to find out what each respondent means in answering questions about his or her "neighborhood".

By specifying a consistent spatial referent through the series of questions on neighborhood conditions and services, we would have greater confidence that all respondents have the same unit in mind when answering questions about their neighborhood, and thus we could more comfortably draw inferences about neighborhood phenomena. For example, an operational definition could be supplied in the paragraph that the interviewer reads in introducing the questions on neighborhood:

The following questions are concerned with different aspects of your PRESENT neighborhood. By the term "neighborhood" I mean [the block on which your house is situated].

A refinement of this approach would be to supply different spatial referents depending on the type of place in which a respondent was located. Thus, respondents located in rural, suburban and urban areas could be presented different operational definitions for the term, neighborhood.

One disadvantage with supplying a uniform definition to all respondents (or to large sub-groups of respondents) is that HUD has to choose and then stick with a particular spatial notion of neighborhood. If there were an areal unit that made substantive sense as well as satisfied the goals of numerous planning, intervention and evaluation activities, then we would feel more comfortable with an imposed definition. If it were the case, for example, that the block-face was a convenient unit on which to base many neighborhood policies, then it might make sense to use that unit of measurement for a social indicator survey like the AHS. However, our knowledge of HUD programs suggests that any particular operational definition would not necessarily apply to every neighborhood policy and would unfortunately tend to become reified, even if not particularly useful.

An alternative approach to imposing a single definition of neighborhood is to ask residents what neighborhood they had in mind, if any, when answering questions about conditions and services available to them. Responses to this question could be pre-coded. Thus, the first question in the section might be:

People have different ideas or "images" about where their neighborhood begins and ends. Here is a list of areas that you may have in mind when discussing

conditions and services in your own neighborhood. Which of the following phrases best represents how you define your neighborhood?

(If R lives in an APARTMENT):

my housing unit and others in this building

(All respondents in cities, suburbs, or towns):

my building and the buildings right next door

all of the buildings that I can see on this block when I stand at the front entrance

all of the buildings on my own block-face and the blocks immediately to the north, south, east and west

my own block-face and the several blocks going north, south, east and west of here
the area served by the elementary school
where children from around here go to attend.

Additional response categories could be used to represent still larger areas or areas that are sparsely populated. An alternative approach to pre-coded verbal responses is to diagram neighborhood types - i.e., depict representative maps from which a respondent would choose the closest approximation to his own image of his neighborhood.

The approach which elicits the image that a respondent applies to his conception of neighborhood - rather than imposing a uniform operational definition - still allows us to speak of neighborhood in terms of a relatively precise spatial area. Additionally, we have the advantage of addressing the issue of how people relate neighborhood conditions and services to particular ideas about neighborhood areas.

In conclusion, the advantage of knowing what sort of image a respondent has in mind when answering questions about the neighborhood - either by imposing a specific mental map as part of the interviewing task or by determining in some manner which mental map the respondent spontaneously uses - is that we can interpret the results with respect

to neighborhoods as global units. Our knowledge then about levels of quality in American neighborhoods will be focused on a precise image which could become the basis for planning and evaluation activities.

Providing other Operational Definitions. One of the reasons why it is difficult to use AHS data to reach conclusions about the quality of neighborhoods is that the data consist almost entirely of peoples' judgments about neighborhood conditions and services. Such data have been referred to as "subjective" because response processes are largely under the control of the individual respondent and we would expect a fair degree of variation in how individuals interpret and respond to such survey questions. To the extent that individual response processes affect a set of measurement procedures (whether those effects are random or constant) responses will be unreliable or idiosyncratic images of neighborhood phenomena.

An analogy to physical measurement may be helpful. Suppose we had fifteen equally-sized rooms, and we asked thirty individuals to independently measure those rooms - two persons per room - giving each measurer a yardstick marked out in inches, feet and centimeters. If we did not tell the measurers what operations were involved (e.g., how to recognize room boundaries, how length and width were defined, how to read the different scales, how to convert one scale to another) then the rooms would likely be measured using different sets of operational criteria resulting in as many as thirty different assessments of size. Even in measuring the same room, two people could come up with two different sizes. Thus, the measurement procedures will be subjective because the measurement operations are not commonly defined but left to the discretion of each individual.

A similar state exists in the AHS when we ask respondents to measure conditions or services in their neighborhood. For example in Item 102a (5), respondents were asked whether they have "poor street lighting" on "their streets". In answering this question, each respondent determines the criteria for the major conceptual components of the question. First, he supplies the definition of his "streets" - which as we suggested in the last section could span a very narrow or very wide areal range. Second, the respondent determines what "street lighting" entails - e.g., only publicly supplied fixtures and/or light from dwelling units. Thirdly, and most important here, the respondent determines the operational criteria for "poor", depending on his personal standards or expectations of ideals for what street lighting should be. It is certainly not inconceivable that two people living next door to each other might give very different assessments of the quality of light on "their streets", or that a resident and a non-resident might view the quality of street lighting differently. What is insufficient or inadequate or poor to one observer might be perfectly adequate to another.

The nature of subjective indicator data is such that the same set of environmental conditions might yield different evaluations resulting from the different cognitive sets of the observers. This problem is particularly disturbing if we seek to compare levels of quality - e.g., evaluate conditions - across a number of neighborhoods. Thus from the AHS survey, we could determine how individuals residing in different enumeration districts evaluate conditions and services there. But we would have no idea whether observed differences (or similarities) in evaluations are a function of actual differences in environment states

or of differences in the perceptual or judgmental processes that residents use in replying to neighborhood questions.

For example, it is possible that the same sort of street lighting occurs in two different neighborhoods, but that our informant in one neighborhood uses a different set of criteria for judging the adequacy of street lighting than the criteria used by the informant in the second neighborhood. If standards of judgment were randomly distributed among the population, we might be able to assume that differences in judgment would cancel out, i.e., were due to sampling variation. However, it is just as likely that standards of judgment vary systematically - either by person characteristics (such as race or income or need for lighting) or by past or present locational characteristics (e.g., urban vs. rural) - and that characteristics which determine standards of judgment are not equally distributed among neighborhoods.

Without any idea as to what the actual conditions are in a neighborhood, we have no way of assessing the meaning of favorable or unfavorable responses, i.e., whether responses are a function of actual differences between environments (e.g., sodium lighting vs. ordinary night lighting, one street on which there are two lights vs. another street on which there are six lights) or a function of differences in the cognitive processing of environmental conditions (e.g., urbanities feel less safe and therefore demand more lights than suburbanities, poor people who are used to lower-quality public services have less stringent requirements for what "good" lighting is). In theory, it might be possible to trace out the cognitive components of an evaluative response, i.e., the perceptual images and the standards of judgment that determine a response to a survey question. In practice, however, such

introspective data are difficult to obtain and somewhat off the mark for a survey oriented toward public policy issues.

In short, our point is that AHS questions about neighborhood conditions and services do not provide sufficiently precise definitions of the criteria to be used in judging conditions or services. The ambiguity of meaning of neighborhood conditions to various respondents is likely to result in data with a fair degree of individual variation which can be attributed to that portion of a response that reflects one's standard for judging conditions rather than the nature of the conditions themselves.

There are several strategies that could be used in designing the data collection procedures in order to overcome the difficulty of interpreting subjective indicator data. One possibility is to build into the questionnaire an operational definition for each of the conditions or services that the AHS measures. While this would increase the chance that respondents would share the same criteria for making qualitative judgments about conditions and services, this is not a completely satisfactory solution. First, we still would have no control over the respondent's cognitive "search" procedures, i.e., the sort of mental imagery he conjures up of his neighborhood when considering such issues as abandoned structures, housing in rundown condition, and so forth. Thus, to the extent that people varied in their perceptual processes responses would still remain subjective. Second, to specify adequately such terms as "odors, smoke, gas" or "street or highway noise" or "adequate or satisfactory" public transportation would require at least several additional sentences in the questionnaire for each condition or service and would therefore be a longer questionnaire to

administer. Third, even if terms were specified, it is unclear that respondents would be able to apply those definitions in answering questions, however willing they might be to try.

One alternative to consider is to supplement information provided by residents with information obtained by trained interviewers.

Using Interviewer Observations. In its current design, the Annual Housing Survey relies almost exclusively on one source of information about neighborhoods: the individual resident. The major reason for using residents as informants is conceptual: it is the citizen's point of view that we wish to assess. The AHS generates data on neighborhoods by soliciting residents' opinions about the areas in which they live. Some of those opinions are more or less descriptive than others. Some items about neighborhood conditions, for example, may be thought of as perceptual statements (e.g., observing and reporting on whether or not there are boarded up structures). Other items are more evaluative in nature (such as judgments as to the adequacy of neighborhood services).

In either case - whether a resident provides relatively perceptual or relatively evaluative data - the asking of such questions makes certain assumptions about the cognitive processes that occur in the mind of the respondent and which determine his observed responses to questions. One assumption behind this strategy of data collection is that a respondent is able and willing to make perceptual observations with a fair degree of accuracy, and that differences between respondents can be attributed to neighborhood differences, not to individual differences in cognitive processing. A second assumption is that in making evaluations of conditions or services, a respondent employs a set of judgmental criteria, one which is shared with other respondents and

whose meaning is also understood by policy analysts at HUD and elsewhere. Thus, when a respondent says his police services are not "adequate", we assume that we know on what basis that evaluation was made and that any number of respondents would look at the same police services and reach the same conclusions.

There are some reasons to doubt, however, that respondents' perceptions and evaluations are reliable indicators of neighborhood conditions and services, i.e., that respondents are capable of accurately reporting on neighborhood conditions and making informed judgments about those conditions. Indeed, as informants, residents are functioning as untrained observers since they are given no guidance as to the mental procedures or criteria for making perceptions or judgments about various neighborhood conditions and services. For example, in asking a respondent to say whether occupied housing is in rundown conditions, we are depending on a resident's ability (1) to conjure up an accurate image of his neighborhood (leaving to him the judgment of where neighborhood boundaries are, (2) to "search" that image for occupied buildings, (3) to decide whether the occupied buildings are rundown, using his own criteria for what "rundown" means and (4) to accurately report the results of his cognitive activity to us. Thus, the observed responses to the neighborhood items are summary judgments or conclusions about neighborhood conditions, resulting from residents' cognitive processes of perception and evaluation over which we have little input or little control.

Because we have little control over the generation of an observed response, the interpretation of variation in responses is ambiguous. When we find variation in responses - between respondents who live in

the same area, or between respondents who live in different areas - it is not clear how to interpret those differences - whether they are due to differences in perceptual processes, evaluative criteria, or other personal characteristics (such as motivation or interest). Likewise, when we observe similar response among residents, it may be because they are responding to similar neighborhood conditions using similar cognitive processes, but, it may also be that different means of processing information about different neighborhoods nevertheless result in the same observed response.

One way to cut down on response variation that emanates from individualistic reactions to the same stimulus (i.e., from variation in defining the perceptual stimuli, the neighborhood, and in carrying out observations and judgments about neighborhood, conditions and services) is to use a set of trained personnel to generate perceptual and evaluation data. If in addition to (or instead of) the resident's view of neighborhood conditions and services, we trained interviewers to make observations and judgments about neighborhood conditions then we would be better able to interpret the meaning of observed responses.

Interviewers would not be adequate informants about all neighborhood conditions. For example, they would not be appropriate as informants about neighborhood services, mainly because they could not familiarize themselves quickly enough with either the presence or working operations of such services in order to make the sorts of judgments required (that is, statements as to how "adequate" or "satisfactory" they are). In addition, the concept of adequacy or satisfaction is by its very nature much more subjective and harder to operationalize than more concrete perceptions or judgments.

Our suggested strategy is to use interviewers to rate the relatively perceptual or observable aspects of neighborhood life - i.e., those aspects on which there can be a fairly shared degree of consensus concerning the criteria for judgment - in order to eliminate spurious effects (such as bad recall, lack of training or shared consensus) that cause unreliability of items. Concurrently, more subjective or evaluative items - such as whether people like to live in their neighborhood - could be assessed in relation to this set of relatively objective characteristics.

The underlying framework for this approach - which relies on both interviewer as well as resident ratings of neighborhood conditions - is a model in which neither subjective nor objective indicators alone is sufficient for understanding why people think neighborhoods are of high quality. Judgments of global quality may be inherently subjective and difficult to define either conceptually or operationally. Just as an individual can't tell you why he likes another person, but can tell you whether he does, so an individual may not be able to tell you why he likes his neighborhood but can tell you whether he does.

By using trained personnel to assess the state of neighborhood conditions, we have a better chance of objectifying the information we receive about conditions in an area. We have more confidence that the observed data are reliably measured, since they are generated through a set of standardized procedures and a set of trained observers. We thus have the opportunity to dissect the determinants of neighborhood quality in terms of conditions in the neighborhood, evaluations of those conditions using a set of well-defined and explicit criteria, and characteristics of residents.

Nonetheless, there are a number of caveats to bear in mind if interviewer ratings are to be used extensively on the AHS. The use of such ratings would necessitate the specification (by HUD) of operational definitions for each of the conditions to be assessed. At the same time, such ratings would require extensive training of interviewers, backed up by methodological studies to determine interviewer reliability. It has been our experience, for example, that reliable ratings of physical conditions are not easily obtained, e.g., two different observers even when trained into the same criteria, will frequently make different judgments about the same area, or even the same dwelling unit. Third, such ratings do not allay the issue of neighborhood definition, and the area the interviewer is to consider when he/she makes his/her perceptions or evaluations of an area. For example, in the one interviewer observation that currently exists on the AHS, the interviewer is asked to judge buildings "on this street". We suspect that the term "this street" has multiple interpretations, moreover, it may not be feasible to define in advance a useful areal unit for making interviewer ratings.

Finally, past research demonstrates that depending on the perspective of the observer, different sorts of opinions and judgments may be rendered about the same set of conditions. For example, it has been found that experts' views of residential areas were discrepant from residents' views. Several studies show that architects and planners look at different features with different standards of judgment (Lansing and Marans, 1969, Troy, 1971). Thus, if the goal of the Annual Housing Survey is to generate data that reflects the citizen's perspective, it

is proper that we continue to obtain citizen's perspective data from other points of view.

Expanding Questionnaire Context. Two broad dimensions of neighborhood quality which are not well represented in the AHS are those dealing with social climate and location. Many studies have demonstrated that peoples' thoughts about the social milieu within which they live underlie their overall evaluation of the neighborhood. Early urban ecologists, for example, studied social aspects of local areas (such as the norms of neighborly behavior, the level of affective attachment to an area, the perception of the neighborhood as a social unit or community) as a means of defining and comparing neighborhoods and as a means of assessing the quality of neighborhoods. More recently, Gans found that the sense of "fitting into" the neighborhood was an important factor in satisfaction with Levittown neighborhoods, survey research at both the University of Michigan and the University of Chicago also found that having friendly neighbors enhances global levels of neighborhood satisfaction. Thus, neighborhood research has generally demonstrated that the existence of a positive social atmosphere is good, and that neighborhoods without that sense of social unity are less than satisfactory as places to live.

While it has been convenient to planners and policy makers to think of neighborhood quality as a physically-based concept, it is apparent that people think of more than the physical or service aspects of an area in assessing the worth of the neighborhood. Thus, the desirability of a neighborhood is enhanced by a positive perception of the social climate, more specifically, the perception that neighbors will be friendly and supportive and share a common set of interests and values,

at least with respect to neighborhood affairs, and perhaps even more generally.

Therefore, consideration should be given to tapping the dimension of social climate above and beyond the issue of basic security (which is already partially addressed by the respondents' views of crime in the neighborhood).

It would probably be wise to keep any measure of sociability at a fairly general level. A concept commonly used in previous survey research which has a demonstrated empirical importance for explaining satisfaction with the neighborhood is the idea of friendliness. For example, "How would you rate the friendliness of this neighborhood: very friendly, moderately friendly, not friendly?" Similarly, a more narrow question about frequency of conversation with neighbors ("How often do you talk to your neighbors: daily, weekly, monthly, almost never?") may also be an appropriate indicator of neighborhood sociability. Still another possibility is to simply ask, "In general, do you like the people who live in your neighborhood, do you feel neutral about them, or do you dislike them?"

One objective to including a question about social climate is that it is difficult to directly intervene in neighborhoods in order to modify the level or quality of the social climate. Federal and local programs are generally designed with reference to the physical conditions or the provision of neighborhood services.² Nevertheless, if neighborhood quality is determined to some significant extent by the type of social climate in an area, then by not measuring and analyzing

² Of course, one can argue that changes in these conditions may indirectly affect changes in the social climate, a basic premise of

the influence of social climate relative to physical or service characteristics we run the risk of misunderstanding the potential effect of programs based on changes in physical and service conditions. What we are referring to is the danger of "misspecifying" the causes of neighborhood quality. It may be, for example that without accounting for the influence of social climate in analyses of neighborhood quality, we would overestimate the importance of physical or service conditions, and in practical terms, allocate resources to programs that ultimately would have a smaller than expected effect. Thus, the purpose of including a question or set of questions about the social climate of a neighborhood is to guard against overestimating the role that physical conditions and services play in influencing neighborhood quality. Rather, by measuring a more complete panoply of neighborhood characteristics, we will be better able to understand the relative importance of any particular characteristic to neighborhood quality.

The dimension of location is the second aspect of neighborhoods that is conspicuously missing from items in the AHS. Intuitively, it seems reasonable that convenience of a neighborhood's location to place of work, shopping, and leisure activities would affect judgments about neighborhood quality. Unfortunately, previous research concerning the importance of location does not clearly demonstrate that locational factors are of a high priority in the public mind. As we enter an era in which the cost of transportation increases, however, location may have a larger effect in determining neighborhood quality. Therefore further consideration should be given to adding some measure of

environmental design, although empirically the links between physical and social conditions are not straightforward.

locational convenience to the set of neighborhood items in the AHS. For example, one may ask: "How convenient is this neighborhood's location for travel to (work) (grocery shopping) (leisure activities)? Is it very convenient, moderately convenient or not convenient?" An alternative form may measure perceived distances to work, shopping and leisure activities.

In addition to tapping peoples' evaluations of neighborhood components, the AHS currently uses one measure of overall neighborhood quality: "In view of all the things we have talked about, how would you rate this NEIGHBORHOOD as a place to live - would you say it is excellent, good, fair or poor?" One limitation in this question is that it cues the respondent to consider only those characteristics previously mentioned on the AHS when evaluating his or her neighborhood. We suspect that some respondents follow this instruction while others do not. In the process of answering the question, some respondents will have in mind only the named physical and service conditions, alternatively, some respondents may have in mind only a selection of listed conditions - perhaps the most recently mentioned conditions - and still another possibility is that some respondents may be answering the question by referring mentally to other unlisted characteristics of neighborhoods, such as social or locational characteristics.

The result of variability in the cognitive process of responding to this question is a limited ability to understand the meaning of the observed responses. For example, if someone states that his neighborhood is a "good" place to live, we do not know if his evaluation refers only to the physical characteristics. Indeed, one possible reason for the typical difficulty in explaining a large portion of the

variance in neighborhood quality (e.g., Marans, 1979) might be that for most people, the overall rating encompasses a much broader spectrum of characteristics than the question wording would lead us to believe.

One implication of this line of reasoning is that the summary evaluation should not limit respondents to the previous list of neighborhood characteristics, but rather, should allow the respondent to decide in his own mind which characteristics of a neighborhood he assesses in reaching a conclusion about neighborhood quality. Thus, one could simply ask, "How would you rate this neighborhood as a place to live?" or, more precisely, "How would you rate the quality of this neighborhood?" Then, one could determine empirically which aspects of the neighborhood play a role in determining the overall evaluation of neighborhood quality.

A second problem with the current global rating of neighborhood is the nature of the response categories. The distribution of responses on global quality of life indicators are usually highly skewed, with the bulk of the responses tending toward the positive. This is certainly the case with the AHS's general evaluation of neighborhoods, as data from the 1975 survey demonstrates (see Figure 2). Thus, only 12 percent of respondents from owner-occupied units and 26 percent of respondents from renter-occupied units answer "fair" or "poor" in rating their neighborhoods.

We strongly recommend that experiments be made with different forms of response categories with the goal of normalizing the distribution of responses and concomitantly, building more variation into the response distribution. Increased variation will enhance the analyst's and policy maker's ability to understand these items, since many of the statistical

Figure VI-2

Distribution of Respondent Questions or Overall Opinion of Neighborhood (1975)

UNITED STATES	UNITED STATES	INSIDE SMSA'S			OUTSIDE SMSA'S
		TOTAL	IN CENTRAL CITIES	NOT IN CENTRAL CITIES	
OVERALL OPINION OF NEIGHBORHOOD					
OWNER OCCUPIED.					
EXCELLENT	46 867	30 383	11 280	19 104	16 484
GOOD	19 709	12 680	3 850	8 830	7 029
FAIR	21 180	13 647	5 298	8 348	7 533
POOR	5 105	3 455	1 778	1 677	1 650
NOT REPORTED	678	475	297	179	203
	195	127	57	69	69
HOUSEHOLD WOULD LIKE TO MOVE.					
EXCELLENT	4 020	2 999	1 450	1 549	1 021
GOOD	391	299	86	213	92
FAIR	1 563	1 135	487	648	428
POOR	1 595	1 213	654	559	382
NOT REPORTED	463	344	218	126	119
	9	8	5	3	1
HOUSEHOLD WOULD NOT LIKE TO MOVE.					
EXCELLENT	42 581	27 210	9 761	17 450	15 371
GOOD	19 274	12 353	3 759	8 594	6 921
FAIR	19 550	12 473	4 798	7 675	7 077
POOR	3 488	2 225	1 116	1 109	1 263
NOT REPORTED	212	129	77	52	83
	57	31	11	20	26
	266	174	69	105	92
RENTER OCCUPIED					
EXCELLENT	25 656	19 283	11 469	7 814	6 373
GOOD	5 994	4 253	2 022	2 231	1 740
FAIR	12 720	9 362	5 395	3 967	3 357
POOR	5 714	4 598	3 222	1 376	1 116
NOT REPORTED	1 072	942	749	193	131
	156	128	81	47	28
HOUSEHOLD WOULD LIKE TO MOVE.					
EXCELLENT	4 030	3 381	2 259	1 123	649
GOOD	170	137	54	82	33
FAIR	1 155	932	525	407	223
POOR	1 913	1 603	1 115	488	310
NOT REPORTED	788	705	560	145	83
	4	4	4	-	-
HOUSEHOLD WOULD NOT LIKE TO MOVE.					
EXCELLENT	21 424	15 739	9 120	6 619	5 685
GOOD	5 806	4 107	1 963	2 144	1 699
FAIR	11 522	8 399	4 860	3 539	3 123
POOR	3 781	2 976	2 095	881	804
NOT REPORTED	282	235	188	47	47
	34	22	13	8	13
	201	163	90	72	39

techniques used in relational analyses of survey data depend on distributional assumptions not met by these data.

The difficulty with changing the response categories is that without some sort of pilot work, it is not clear exactly what changes should be made. Some methodological research has been conducted on the dimension of response in social indicator variables (e.g., Andrews and Withey, 1976, Andrews and McKennell, 1980) but better research is needed specifically in the area of neighborhood quality before we would be comfortable with large-scale implementation of changes in response categories.

Allowing Flexible Survey Content. Apparently, not all questions on the neighborhood section of the AHS are asked every year or in both the SMSA and national samples. Furthermore, documentation of how content changes is poor. If the purpose of asking about neighborhood characteristics is to allow monitoring of neighborhood quality over time, we believe that consideration should be given to fielding a fixed set of questions at regular intervals, say annually, and additionally field questions of lower priority at less frequent intervals. Certain issues vary in their degree of importance depending on changes in the political and economic climate. For example, because of energy issues, locational convenience may become more important to monitor over the next decade than it has been in the past. Similarly, the need for items concerning neighborhood conservation, neighborhood integration and so on varies across time.

What HUD might do to meet these changing needs is to block out a segment on the AHS which would be allocated to neighborhood issues. Part of that segment may be taken up by questions asked annually, part

may be taken up by questions asked biennially or triennially, and part may be taken up by questions asked on a one-time basis. This arrangement builds flexibility into the design of the AHS content, so that the survey data might be responsive both to long-term monitoring efforts and to more immediate needs of decision-makers.

Sample Design. A sample design in which residents in a particular neighborhood are interviewed would allow us to aggregate individual responses and construct "contextual" variables (Lazarsfeld and Menzel, 1968), i.e., variables relatively more characteristic of the neighborhood rather than of any individual resident in the neighborhood. Such a strategy has been used by Scharf (1968) and Rodgers et al., (1975) with data sets similar in content to the AHS in order to study the components of neighborhood quality.

Just as social scientists often use information about individuals (e.g., race, income) to construct variables that characterize an entire group (such as percent of residents who are black, who are above average income), so we could similarly use the AHS opinion data to construct "compositional" variables reflecting public opinion in an area (e.g., percent who rate police services as "adequate", percent who state that there is "heavy traffic" on their streets).

We can think of aggregate neighborhood opinion variables as global properties of a neighborhood, insofar as we can infer the quality of a neighborhood condition - for example, the adequacy of a service - from a neighborhood's score on that variable. This view of aggregate opinion data uses the hypothesis found in Thurstone (1959) about measuring qualities of an object: the more an object (the neighborhood) has of a given and presumably continuous characteristic (e.g., adequacy of police

service), the greater the probability that a respondent will give a "positive" response (e.g., say he/she thinks the service is adequate). We can also assume that, although the form usually found for this response curve is roughly logistic in the range we are dealing with it can be treated as linear. Generally, in aggregating opinion data we have a basis for generating more reliable and less idiosyncratic indicators of neighborhood conditions than are generated by interviewing only one or two informants.

Currently, the general design of the AHS is to reinterview annually in the same dwelling units, and by inference in the same sampling units at the various stages of selection. It therefore would be quite feasible to select one of the smaller sampling units (perhaps the enumeration district) to be representative of a "neighborhood" and then select a fairly extensive within-neighborhood sample dwelling, for interviewing. By making a few reasonable assumptions about the use of such sampling units as definitions for the neighborhood, one could then aggregate responses within a given area in order to generate variables characteristic of the area, not just of two or three continuous dwelling units in the area. Data analyses would then be conducted either with an entirely aggregate data set or with some combination of individual and aggregate data. For example, one could define the dependent variable "neighborhood quality" as the percent of people in an area who rate their neighborhood "good", and then perform various sorts of analyses with respect to the level and structure of neighborhood quality.

Designing an Appropriate Sampling Unit. The choice of an appropriate sampling unit should refer to the two major purposes for collecting data on neighborhoods. These are (1) to monitor and study

public judgments about the quality of American neighborhoods and (2) to use the data for designing and implementing neighborhood programs. Unfortunately, neither of these purposes necessarily suggest a ready solution to the choice of a representative sampling unit. The first goal implies that in selecting an operational definition we can rely on the public's spatial definition of the neighborhood concept. As we noted earlier, the problem with this strategy is that people appear to vary in their images of what constitutes a neighborhood. Indeed, since research on cognitive maps of neighborhoods shows that there is no strong public consensus on the areal size of neighborhoods (Glass, 1948, Caplow, 1964, Keller, 1968, Marans, 1976) we cannot rely on public opinion to guide us in our determination of the "typical" neighborhood area.

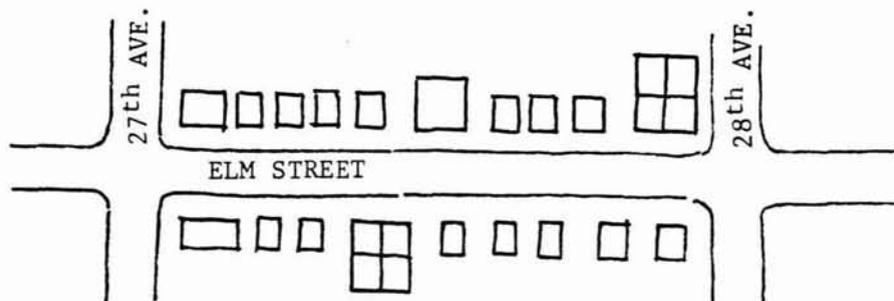
A second strategy might be use a sampling unit that most closely approximates the areas used in the implementation of neighborhood policies. Here the major drawback is that there is no single unit upon which HUD hinges all of its programs. For example, many programs are planned at the federal level but leave to local government the decision about what constitutes a neighborhood unit. In addition, the target populations for HUD programs are frequently defined by personal characteristics (such as race or income level) without any accompanying requirement regarding type of neighborhood in which the population lives. An example is the Community Development Block Grant program, which distributes federal funds to local governments to be used to rehabilitate housing units and services and conditions about the residential environment. In some cities, such funds are targeted to neighborhoods, although the size of the neighborhood varies. In other

cities, funds are distributed more narrowly to housing units which are scattered across the city without any particular areal pattern. This example illustrates our general point: that no specific sampling unit will suffice as a universally appropriate and acceptable definition of neighborhood.

In spite of our concern about the general utility of a single definition of neighborhood, we nevertheless can consider the alternative definitions along with their advantages and disadvantages. In most studies of neighborhood phenomena, one of three sampling units has typically been used: the Census Tract, the locally-designated area, and the block-face. At this time, we believe that for the AHS the most appropriate unit sample should be the block-face.

Advantages and Disadvantages of the Block-Face. The block-face is defined as all of the dwelling units residing on the resident's side of his block and those units directly facing his side of the block.

Figure VI-3
The Elm Street Block-Face
 (one square represents a single dwelling unit)



The idea of the block-face as a sampling unit is similar to the concept of the micro-neighborhood, used in many of the studies of the University

of Michigan's neighborhood quality. Like the micro-neighborhood, the block-face unit focuses on the immediate residential environment - the dwelling unit and the surrounding houses that one can see from one's front door.

There are several conceptual and operational advantages to using the block-face as the sampling unit. First, in spite of the fact that neighborhood maps vary in area size, at least they include the immediate residential environment. The block-face is about the most circumscribed area that people think of when they imagine their neighborhood, so that the idea of neighborhood includes at a minimum the block-face, even if the concept of neighborhood sometimes refers to a more extensive area. Second, many of the services measured on the AHS are received either at the door of the dwelling unit or on the block-face. This is true of garbage collection, fire and police protection and public transportation. Third, where there is variation in neighborhood conditions, such variations can occur on a block-face by block-face basis. Such conditions as noise, odors, lighting, crime and traffic are relatively consistent within the block-face but probably have greater variation between block-faces, particularly in urban areas.

Thus, one principle that guides us to the use of the block-face is a conservative one. Mental images of neighborhoods at least encompass the block-face and services and conditions that specify neighborhood characteristics occur at least on the block-face.

In general, we can conceive of the block-face as a relatively homogeneous area with respect to various neighborhood characteristics. One implication of this premise is that between-respondent variation on a block-face will probably not be due to areal location on the block.

For example, the differences in opinion about areal conditions between neighborhood dwelling units are probably due to factors unrelated to the small differences in location between dwelling units on the same block-face.

Another advantage of using the block-face as the neighborhood concept is that in referring to block-faces, there is a greater likelihood that people are familiar enough with conditions there so as to act as responsible informants. As a general rule, it is more difficult to perceive and evaluate neighborhood conditions over a larger rather than smaller area, whether those cognitive tasks are performed by interviewer or respondent. The larger the neighborhood unit, the less likely an individual will have consistently good information about all areas of that unit, and the harder it is for an individual to mentally process and synthesize that information. Thus an advantage of the block-face as opposed to larger territorial units (such as the block-group or the Census Tract) is that measuring the larger units - either by interviewer or respondent - requires a greater cognitive effort. Although interviewers might be trained into assessing larger areas, it is unlikely that the average respondent would have that capability. Rather, if we were to ask people to review conditions in those larger areas, we would probably get responses based on conditions immediately around the dwelling unit, since these are the conditions with which people are most familiar and since a smaller number of perceptions are easier to process than a larger number.

One possible problem in sampling residents from block-faces is that not everyone lives on a block-face (e.g. people live across the street from parks, in rural and in some suburban areas there may not be

demarcated blocks). As a general rule, the sampling of block-faces is probably most feasible in cities, but as the degree of urbanism declines, sampling by block-face may be problematical. Currently, we do not have adequate descriptive data with which to determine whether a large number of people live in environments that make sampling by block-faces efficient.

In spite of some difficulty in implementing the block-face as a sampling unit everywhere, such a unit has our recommendation on several grounds. It is close to a concept of neighborhood that has wide-spread acceptability, it is generally appropriate as a sampling unit across a range of locales, and the likelihood is great that good information can be provided about the unit by both interviewers and respondents.

Alternatives to the block-face: We have considered other areal units as possibilities for sampling, but conclude that none has the conceptual and operational advantages of the block-face. For example, we initially considered the Census Tract or enumeration district. However, because such units are defined for administrative purposes, they have a number of characteristics that make them conceptually unsuited for the study of neighborhoods. One is that there is variation in areal size of such tracts, because they are generally defined with reference to size of population. Second, EDs or tracts sometimes but not always conform to local definitions of neighborhood boundaries and thus may contradict the mental images naturally used by respondents. Finally, many tracts or EDs probably have a high degree of within-unit variation on the delivery of services or on physical and social conditions, making within-unit variability too high for reliable between-neighborhood assessments.

Another option for designating the neighborhood unit is to rely on local informants to map out the various sections of the city which by local consensus are considered to be neighborhoods. This approach has conceptual appeal, but may not be possible in practice, either because not all local areas have rigidly defined neighborhood units, or because residents are not likely to agree on what the boundaries of neighborhoods are (Herman, 1964, Ross, 1962, Wilmott, 1962).

In sum, we have some reservations about recommending any particular spatial unit to represent the idea of neighborhood since depending on the substantive issues, units of differing area size can be acceptable operations definitions for the idea of neighborhood. On operational grounds, however, smaller units are easier to measure than larger units, an argument that favors the block-face. Perhaps the most important criterion, however, is that of utility. Here the decision about which spatial unit to use should probably be a political decision, insofar as AHS data on neighborhoods are used to design and implement various neighborhood policies.

Summary

In reviewing the Annual Housing Survey, we have recommended that considerations be given to making changes in the nature of data collection procedures, the content of data that are collected and the sample design. We make these recommendations with an eye toward improving the ability of HUD to monitor and evaluate the quality of American neighborhoods. We are aware that not all of the suggested changes are at the level of specificity that lead to immediate implementation. We have, however, deliberately refrained from making hard and fast recommendations because we strongly believe that changes

should not be implemented until an extensive and empirically-based evaluation of design alternatives can be conducted. To our knowledge, there has been no such concerted efforts at methodological research with respect to examining neighborhood quality. Indeed, our own review of the literature shows a surprising lack of concentration of the methodology of studying neighborhood quality, particularly with regard to alternative methodological techniques (e.g., sample design, content, question design).

There are many operational and analytic questions yet to be answered before implementing even moderate changes in the AHS.³ We believe that this paper presents many of the major issues pertinent to the design of reliable and valid measures of neighborhood quality. For these issues to be resolved, however, requires basic research including field experiments in which the relative efficiency, feasibility and utility of specific changes can be more fully assessed.

³ For example, is it feasible to collect contextual data about neighborhoods aside from respondent observations or opinions? Is it possible to develop reliable procedures for conducting interviewer ratings in an area? How can questions best be designed to enhance accurate reporting about neighborhoods?

CHAPTER VII

OVERVIEW AND DIRECTIONS FOR FUTURE RESEARCH

This monograph has presented the state of existing knowledge on the concept and measurement of neighborhood quality. It has done so by examining several prescriptive and analytical approaches to defining neighborhoods and by reviewing the literature on neighborhood quality and its determinants. Within the context of that review, various kinds of neighborhood data have been summarized. At the same time, an overview of the sources of data including the methods used in generating them was presented. We have also discussed a number of methodological issues in conducting empirical research on neighborhoods with a particular focus on the use of the survey approach. As part of that methodological analysis, we have critically examined one vehicle that offers potential for studying neighborhood quality—the Annual Housing Survey conducted under the sponsorship of the U.S. Department of Housing and Urban Development. Within the context of that discussion, we identified several limitations in the current structure of the Annual Housing Survey as it relates to neighborhood quality issues and suggested possible changes so as to overcome these limitations. At a more general level, we offer a number of recommendations for research on neighborhoods in the hope of expanding our knowledge about neighborhood quality and factors that contribute to it. These recommendations can be grouped under two broad categories: research on substantive issues and research on methodological problems. Using our review of the neighborhood literature, several specific substantive and methodological issues seem most amenable to further investigation.

Substantive Issues

Among the numerous topics that we considered in our review, several warrant further investigation if we are to improve our understanding of the concept of neighborhood quality. Although our list can no doubt be expanded, we have noted five topics that we believe can be addressed by either examining the numerous data sets that exist in the files of academic researchers engaged in neighborhood studies over the years, or by generating new data.

Empirically-Based Definitions of Neighborhood Quality. One suggestion is to extend the work previously done on the definition of neighborhood quality, particularly as quality is defined from the resident's perspective. This would involve asking residents to rate a panoply of neighborhood attributes. A number of such surveys have been undertaken, most notably several at the University of Michigan and within the context of the Annual Housing Survey. Few of these studies, however, do not completely span all of the characteristics that are deemed important to the definition of the neighborhood quality. Future study should attempt to broaden the range of attributes they include so as to allow more definitive specification of the nature of neighborhood quality.

Relative Importance of Neighborhood Attributes to Overall Neighborhood Quality. In our review, we identified a number of studies that focused on the relative importance of specific neighborhood characteristics to the determination of overall quality. As a set, these studies are not definitive. Characteristic of them are shortcomings in either the methodology of data collection or the ways in which data were analyzed. Nevertheless, these studies are suggestive of

several lines of research that would increase our understanding of neighborhood quality.

First, studies are needed that incorporate both subjective and objective indicators of neighborhood phenomena. From our review, it appears that relatively few researchers who incorporate subjective data (evaluations, perceptions, preferences) do not simultaneously measure objective data (observations by trained observers, archival and record data). As a result, it is very difficult to have any refined understanding of the relative importance of actual conditions in an area (e.g., level of crime) as compared to perceived conditions. A notable exception in this regard is the recent work performed by Taub and his associates (1981). Such study designs are rare, however.

The absence of studies that coordinate subjective and objective indicators has several implications for knowledge about neighborhood quality and for neighborhood planning. First, we do not know the extent to which residents' reports about neighborhood phenomena are accurate representations of what conditions in their neighborhoods are actually like. We suspect that the reliability of residents' reports depends partly on the phenomenon that is being considered. But empirical studies comparing subjective indicators to their objective counterparts--on a characteristic by characteristic basis--would contribute significantly to both our understanding of an important component of the urban scene and to more informed neighborhood planning and development.

Second, it is unclear whether conditions that are traditionally considered to be "undesirable"--such as low-quality housing, poor schools, or the absence of recreational facilities--have an impact on

how residents evaluate their neighborhoods and whether the actions of residents reflect the presence of those conditions. This is not to say that negative perceptions and evaluations on the part of residents have no impact on overall evaluations of neighborhood quality. In fact, as best as we can determine, unfavorable evaluations of specific neighborhood characteristics do have a negative influence on global evaluations of an area. Rather, an issue open for research is the extent to which actual conditions are perceived accurately by residents and, concomitantly, acted upon by residents. As an example, to what extent does the actual lack of recreational facilities or low quality schools determine moving behavior? Unless studies incorporate objective measures of neighborhood characteristics along with measures of residents' perceptions and evaluations, hypothesized models of the relationship between objective and subjective indicators--of the sort that have guided earlier research efforts cannot be confirmed empirically (e.g., Campbell and Converse, 1976).

The confirmation of models that incorporate objective and subjective indicators would have implications for basic knowledge as well as policy applications. For example, if there were no uniform correspondence between actual and perceived conditions, then efforts on the part of planners to improve actual conditions, with the expectation that residents would be more satisfied with a neighborhood, might be misdirected. In an era when both public and private resources for neighborhood intervention are increasingly scarce, it becomes essential to understand which conditions are best acted on, and what consequences various interventions will ultimately have for the lives of residents.

Research on the relative importance of neighborhood characteristics can follow still another path. In our review, we were struck by the fact that in spite of obvious variation among residential areas, the majority of residents are relatively satisfied with their neighborhoods. One explanation for this high level of satisfaction is that the same overall level of quality ascribed to an area may result from different combinations of neighborhood characteristics. That is, there may be no single ideal pattern or set of characteristics that a neighborhood must have to be well-evaluated. Rather, it may be the case that because judgments of neighborhood quality are based on so many different neighborhood characteristics, no one "structure" or bundle of neighborhood characteristics results in a single level of overall quality.

It is possible, too, that given the large number of neighborhood characteristics that enter into peoples' judgments of overall quality, there is some room for "give and take." Thus, in any given neighborhood, characteristics of high quality may compensate for deficiencies among other characteristics. This can be frequently seen, on an anecdotal level, in discussions of urban neighborhoods that are located close to the centers of metropolitan areas. Access to recreational facilities, to social services, and to workplaces may be sufficiently attractive to residents to make up for relatively less desirable levels of safety, school quality, and housing condition. Of interest, then, for further research would be studies that better account for the various structural relationships that underlie measures of overall neighborhood quality.

Subgroup Variation in Preferences about Neighborhood Phenomena. A third line of research involves extending earlier work on individual or subgroup preferences for attributes within neighborhoods. Some studies have shown that various subgroups in the population have different preferences with respect to characteristics of local areas. Appleyard and his associates, for example, suggested that personality type and life-cycle stage influence the desirability of various environmental characteristics (1981). And studies of the elderly suggest that their definitions of a "good" neighborhood may differ from the definitions of the non-elderly (Lawton, 1979). Analyses of survey data also show small but significant differences by demographic factors in the ways people evaluate their neighborhoods. In general, it seems reasonable that people vary in their notions of what neighborhood quality is, and what characteristics are desirable in a neighborhood. Better knowledge of which areal characteristics are most salient to the well-being of population subgroups would facilitate planning efforts and make us better able to target interventions in neighborhoods so that they meet the needs of the different groups of people who live there.

Determinants of Moving Behavior. A number of studies have concentrated on specifying factors that explain moving into and out of neighborhoods. The findings show that family circumstances, such as new job or change in life-cycle state, and neighborhood circumstances, such as changes in the school environment, are factors that influence residential mobility. We believe that several types of studies that are integrative in their approach to understanding mobility are warranted. First, the full range of supposed influences on moving--family, neighborhood, community, and economic factors--should be incorporated in

an understanding of why people move. Furthermore, it would be useful to include subjective as well as objective indicators of these factors so that models of moving behavior distinguish between the influence of actual circumstances and the influence of perceived circumstances. Additionally, it would be desirable to understand not only why people move, but also why they do not move if they want to. The role of the economic climate may play a major role in residential mobility.

Methodological Issues

As in any field based on research, one can always fine-tune methodological techniques. From our review of past studies, we have identified a few lines of methodological research that cut across a number of studies and, in our opinion, warrant further intensive exploration.

Definitions of the Neighborhood. Throughout various parts of this monograph, we have considered the issue of neighborhood definition. While there does not appear to be any consistent way to describe "neighborhood," it is also the case that no single definition is entirely appropriate to the purposes of all studies.

Nevertheless, while the conceptual definitions for neighborhood may vary, there are a number of ways in which existing operational definitions can be refined. We believe that this can be achieved by systematically evaluating these definitions within a research framework. Perhaps the most fruitful and interesting line of research to pursue involves a comparison of methodological approaches to defining the neighborhood unit. For example, in Chapter VI, we mentioned different techniques that the Annual Housing Survey could use to identify what neighborhood referent a survey respondent has in mind when answering

questions about his or her neighborhood. These techniques could be tested and compared within different population groups so as to enhance our understanding of the response processes that underlie research on neighborhoods.

Alternative Strategies for Analysis. Unlike many other areas of social research, research on neighborhoods seems to rely on relatively traditional statistical models for data analysis. Numerous studies rely on univariate or bivariate descriptions of the data; the use of ordinary least squares multiple regression is at the forefront of data analytic techniques in this field.

We believe that data analyses of neighborhood phenomena generally, and of neighborhood quality specifically, could well benefit from the use of newer, more sophisticated statistical models, such as those developed for categorical data by sociologists (e.g., log-linear analysis) and by psychometricians (e.g., latent trait analysis). As an example, consider one of the basic issues in neighborhood research: which characteristics of neighborhoods are important to overall judgments of quality. Traditionally, this question has been studied using techniques based on the general linear model, even though collected data on neighborhoods are not always compatible with the use of such models. Instead, it may be worthwhile to address this question using a latent trait model, which offers a way of assessing the relative importance of neighborhood characteristics, but also is better able to handle the qualitative data that frequently marks measures of neighborhood phenomena. These techniques may be more suitable to the kinds of data that are collected and may also permit a better marriage

between substantive issues and the statistical models used to address those issues.

Methodologies to Determine Neighborhood Preferences. Generally, there have been two approaches to determining neighborhood preferences. One is to ask survey respondents what kinds and levels of neighborhood characteristics they value, relying primarily on verbal reports. The second is to use some variation of a trade-off game, relying on perceptual stimuli such as photographs or drawings that are generated in an investigator's laboratory. Both of these approaches as currently practiced have some disadvantages for assessing neighborhood preferences. The problem with the first approach is that verbal reports, typically formatted in terms of responses to one-sentence survey questions, are phrased at too abstract a level to be useful in environmental planning and intervention. Asking people whether they like "a lot" of greenery or "more" open space gives little concrete guidance as to how the preference should be operationalized. The second approach, on the other hand, more clearly operationalizes what a preference is, but it suffers from an almost complete reliance on measuring preference for perceptual stimuli, i.e., those neighborhood characteristics that one can physically see and hear. There are, however, other features of a neighborhood that impact on peoples' judgments of neighborhood quality, such as aspects of the sociocultural environment. While some work has been done on the desirable racial mix in a neighborhood, little has been done on preferences for other aspects of the sociocultural environment such as whether people want neighbors that are friends, acquaintances, or relative strangers, or whether people want to live in areas that are ethnically or economically

homogeneous, or in areas that have a high level of informal interactions among residents. Clearly, more attention can be focused on the methodologies for assessing neighborhood preferences, since this approach has the potential of being a cost-efficient tool for neighborhood planning.

APPENDIX

MEASURES OF NEIGHBORHOOD QUALITY

The following measures have been gleaned from questionnaires, books, technical reports, codebooks, and unpublished studies dealing with neighborhood quality and its dimensions. The measures are intended to be illustrative and not an exhaustive inventory of the material collected as part of our review. The measures are organized according to the material presented in Chapter III. In the first part, questions representing global measures of neighborhood quality are presented. In the second through fifth parts, questions covering the four dimensions of neighborhood quality are presented. These dimensions cover the physical environment, location, services and facilities, and the sociocultural environment. The final part of this appendix presents combined measures which utilize lists of neighborhood attributes. For each question, respondents were asked to evaluate the quality of the listed attributes using a uniform response set.

GLOBAL MEASURES

CONCEPT	DESCRIPTION	SOURCE
Satisfactions/ dissatisfactions	"In general, how satisfied or dissatisfied are you with this neighborhood as a place to live. Would you say you are very satisfied, somewhat satisfied, somewhat dissatisfied or very dissatisfied?"	Abt Associates, 1974
	"Everything considered, which of the categories best describes how satisfied you are with your neighborhood?" Response categories were: "very dissatisfied," "dissatisfied," "uncertain," "satisfied," or "very satisfied."	Academy for Contemporary Problems, 1975
	"Generally, how satisfied are you with conditions in this neighborhood?" Response categories were: "satisfied," "dissatisfied" or "neither."	Ahlbrandt, n.d.
	"The people in my neighborhood are not very satisfied being there." Response categories were: "completely false," "somewhat false," "both true and false," "somewhat true" or "completely true."	Andrews and Withey, 1976
	"Taking all things into consideration, were you very satisfied, somewhat satisfied, or dissatisfied with your primary/previous residence and the surrounding neighborhood when you decided to purchase this property?" Respondent was then asked, "What things did you dislike about your primary/previous residence and neighborhood at that time?"	Burby, 1971
	"Taking all things into consideration, are you entirely satisfied, fairly satisfied, dissatisfied, or very dissatisfied with this neighborhood?"	Butler, et al., 1969
	"Which of the statements is closest to how you feel about living in this neighborhood." A show card was presented with the following response categories: "very much satisfied," "satisfied," "neutral," "dissatisfied," and "very much dissatisfied."	Chapin and Weiss, 1962
	"All things considered, how satisfied are you with life in your neighborhood?" Response categories were: "very satisfied," "satisfied," "dissatisfied," and "very dissatisfied."	City of Cincinnati, 1978
	"Summing up your feelings about the estate outside your house/flat/maisonette, would you say you are very satisfied, fairly satisfied, no feelings either way, rather dissatisfied, or very dissatisfied?"	Department of the Environment, 1972
	"How satisfied are you with this neighborhood?" Response categories were: "very satisfied," "pretty satisfied," "not too satisfied," and "not satisfied at all."	Gollin, et al., 1975

GLOBAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"How satisfied are you with this local district as a place to live?" Response categories ranged from "completely satisfied" to "completely dissatisfied" on a ten-point scale.	Hall and Ring, 1974
	"And how satisfied are you with the neighborhood?" Response categories were: "very," "fairly," "not very," or "not at all."	Menchik and Knight, 1974
	"How would you describe your feelings about your present neighborhood? Would you say you are: definitely satisfied, mostly satisfied, neither satisfied nor dissatisfied, mostly dissatisfied, or definitely dissatisfied?"	Michelson, 1977
	"What three suggestions would you make to improve your potential satisfaction with your home (residence and grounds), location (vis a vis places you want to go), and neighborhood (neighbors and neighbor relations)?"	Michelson, 1977
	"Taking everything into account, how do you feel about living in this neighborhood? Are you completely satisfied, very satisfied, moderately satisfied, slightly satisfied, or not at all satisfied?"	NORC, 1974
	"Here is a card that I want you to use to tell me how satisfied or dissatisfied you are with this neighborhood as a place to live. If you are completely satisfied with it you would say 'eleven' and if you are completely dissatisfied with it you would say 'one'. If you are neither completely satisfied nor completely dissatisfied you would put yourself somewhere from 'two' to 'ten'. The higher the number, the more satisfied you are. In general, how satisfied or dissatisfied are you with this neighborhood as a place to live? Which number on the card comes the closest to how you feel?"	Quality of Life Project, 1977
	"All things considered, how satisfied or dissatisfied are you with this neighborhood as a place to live? Which comes closest to how satisfied or dissatisfied you feel?" A show card with a seven-point scale was presented to the respondent. Response categories ranged from "completely satisfied" to "completely dissatisfied."	Rodgers, et al., 1975 Campbell, et al., 1976
	"Are you satisfied with your present neighborhood as far as its being expensive looking?" Response categories were: "not satisfied" and "satisfied."	Sanoff, 1973
Likes/Dislikes	"What, if anything, bothers you most about living here on this street?"	Appleyard, 1976

GLOBAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"What are the things you like best about living in this part of the city? What are the things about this area that you think are particularly good--the things that make it a desirable place to live?"	Atkinson, 1979
	"What are the things you like least about living in this part of the city? What are the main problems with this area, the things that need attention or need to be changed? Which of these problems do you consider the most serious?"	Atkinson, 1979
	"What do you like best about living here?"	Becker, 1974, Child in the City, 1978
	"What do you like least about living here?"	Becker, 1974, Child in the City, 1978
	"All in all, how much would you say you like living here?" Response categories were: "very much," "fairly well," or "not at all."	Becker, 1974
	"What are the three or four most important reasons you like living in this neighborhood?"	Bradburn, et al., 1970
	"As you see it, what are the three or four most important problems of the neighborhood?"	Bradburn, et al., 1970
	"What do you personally feel is the most serious problem facing people who live in this neighborhood?"	Chapin, 1972
	"What things do you especially like about Easter Hill as a neighborhood?"	Cooper, 1975
	"What is it that you like most about Easter Hill--or to put it another way, if you were to leave here tomorrow, what would you miss most?"	Cooper, 1975
	"Now that I've asked you a lot of questions about the neighborhood, perhaps you could tell me, in general, how you like it as a place to live. Would you say you like it a lot, quite a lot, only a little, not at all, or neither like nor dislike it?"	Cooper, 1975
	"And what are the things you don't like about this neighborhood?"	Cooper, 1975 Rodgers, et al., 1975
	"What do you like about the estate outside your house/flat/maisonette?"	Department of the Environment, 1972
	"What do you dislike about the estate outside your house/flat/maisonette?"	Department of the Environment, 1972
	"What do you like most about this neighborhood?"	Fried, 1973

GLOBAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"What do you dislike most about this neighborhood?"	Fried, 1973
	"All in all, would you say you like this neighborhood very much, like it moderately well, or dislike it?"	Lansing and Hendricks, 1967
	"After living here for a while, did you discover any features of the home, neighborhood, or location that you don't like but hadn't noticed when you bought it?" If respondent answered affirmatively, "What are these?" was asked.	Menchik and Knight, 1974
	"What expectations about this neighborhood itself did you have that weren't fulfilled?"	Michelson, 1977
	"Would the presence of any kind of person, service, store, or facility make things more comfortable?" Respondent was then asked, "What one(s)?"	Michelson, 1977
	"What do you think is the biggest problem that people in your (neighborhood/community) have to face currently?"	NORC, 1963
	"What do you like especially about your present neighborhood?"	Rodgers, et al., 1975 Michelson, 1977
	Town planning students were asked, "How would you personally feel about living in this area (assuming you were satisfied with your own dwelling or could put it right)?" Response categories were: "like it very much," "like it," "neutral," "dislike it," and "dislike it very much."	Troy, 1971
Ratings - general	"In view of all the things we have talked about, how would you rate this neighborhood as a place to live--would you say it is excellent, good, fair or poor?"	AHS, 1976
	"How do you feel about your present neighborhood as a place to live?" Answered on scale with seven categories: "delighted," "pleased," "mostly satisfied," "mixed (about equally satisfied and dissatisfied)," "mostly dissatisfied," "unhappy," and "terrible."	Andrews and Withey, 1976 HUD, 1978
	"Was this street about as you expected it to be before you moved here, or is it better or worse than you expected? Would you say it is much better than expected, slightly better than expected, about the same as expected, slightly worse than expected, or much worse than expected?" If respondent said better or worse than expected, "In what ways is it (better) (worse) than you expected?" was then asked.	Appleyard, 1976

GLOBAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"Which of the statements on that card best describes your feelings all in all about living here on this street? Response categories were: "I'm very happy here," "I'm fairly happy here," "I'm neither happy nor unhappy here," "I'm fairly unhappy here," and "I'm very unhappy here."	Appleyard, 1976
	"How is this neighborhood as a place to live?" Response categories were: "good/excellent," "fair," or "bad/very bad."	Barton, 1975
	"Has living here turned out as you expected?" Respondent was then asked "Why?"	Becker, 1974
	"Would you say the reaction of the surrounding community to your development has been mostly positive, positive and negative or mostly negative?"	Becker, 1974
	"On the whole, how happy are you with living here in (name of neighborhood)? Would you say you're very happy, pretty happy, or not too happy with the neighborhood?"	Bradburn, et al., 1970
	"Considering both price and quality, how would you rate the housing value in this neighborhood--that is, what you get for your money: is it overpriced, about right, or is it a particularly good value?"	Bradburn, et al., 1970
	"In what way, if any, is your neighborhood not a good place to live?"	Dallas City Profile Survey, 1978
	"How is this neighborhood for you and your family to live in: excellent, good, fair, or poor?"	Fried, 1973
	"I'd like to ask you how you feel about this area as a place to live--I mean the area outlined on the map. From your own personal point of view, would you rate this area as a place to live as excellent, good, average, below average, or poor?" Respondent was then asked, "In what ways?"	Lansing, et al., 1970, Zehner, 1977
	"How would you rate this neighborhood as a place to live -- would you say it is excellent, good, fair, or poor?"	Lawton, 1980
	"How do you rate your environment--what you see or hear from your windows, front door and rear yard?" Response categories were: "good," "fair," and "poor."	Norcross, 1973
	"Please give each of the following parts of your life a grade which best expresses your judgment of it. What grade would you give for the neighborhood you live in?" Responses ranged on a ten-point scale from "A+" to "F."	Quality of Life Project, 1977

GLOBAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	Respondent was presented with six faces ranging from one which was smiling to one which was frowning and asked: "Pick the face that shows how you feel about living in this housing project including your apartment, the management, your security, your neighbors and the way this project is managed."	Sadacca, et al., 1971
	Town planning students were asked, "How do you rate this area for its residential amenity?" Response categories were: "very good," "good," "average," "poor," and "very poor."	Troy, 1971
	"Now let's talk about the local area. In general, how do you feel about this neighborhood? Do you think it is a good place to live, a fairly good place, a poor, or a very poor place to live?"	Warren, 1977
	"In general, would you say this (project) (neighborhood) is very good as a place to live, fairly good, not so good, or not good at all as a place to live?"	Wilner, et al., 1962
	"Now here are a few questions that are a little different and would be easier if you filled them out yourself. First, would you please look at this picture of a ladder. Suppose the rung at the top of the ladder represents the kind of neighborhood you would most like to live in and the rung at the bottom of the ladder represents the kind of neighborhood you would least like to live in. Would you please put an X on the rung of the ladder where you personally feel this neighborhood is?" A ladder with six rungs was shown with the top rung indicating "the neighborhood you would most like to live in" and the bottom rung represented by "the neighborhood you would least like to live in."	Zehner and Chapin, 1974
Ratings for special age groups	"In general, how good is this street for children to grow up on? Would you say it is excellent, very good, fairly good, not very good, or poor?"	Appleyard, 1976
	"Is this a good area to raise children or not?" Respondent was then asked, "Why do you say that?"	Atkinson, 1979
	"Do you think this is a good place to bring up children?" Response categories were: "yes," "no" or "depends." Respondent was then asked, "Why?"	Becker, 1974
	"Do you think this is a good neighborhood to bring up children in?"	Cooper, 1975

GLOBAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	Respondent was asked the following question if the household included someone aged 55 and over: "For retired people how would you rate this area as a place to live? Would you say it was excellent, good, average, below average, or poor?" Respondent was then asked, "In what ways?"	Lansing, et al., 1970
	"From the teenagers' point of view, how would you expect them to rate this community as a place to live--would they say it was excellent, good, average, below average, or poor?"	Lansing, et al., 1970 Zehner, 1977
	"As a place to raise children under 12, how would you rate this area--would you say it was excellent, good, average, below average, or poor?" Respondent was then asked, "In what ways?"	Lansing, et al., 1970, Zehner, 1977
	"How would you rate this neighborhood as a place to raise children this year as compared to last year? Would you say this neighborhood is now a better place to raise children, not as good a place to raise children, or the same as last year?"	NORC, 1974
	"How good is this (project)(neighborhood) as a place to raise children. Would you say: very good, fairly good, rather poor, or very poor?" Respondent was then asked, "Why?"	Wilner, et al., 1962
Comparative ratings	"All things considered how does this street compare with the street where you lived before: Would you say it's much better here, it's slightly better here, it's about the same here, it's slightly worse here, or it's much worse here?"	Appleyard, 1976
	"Considering both price and quality, how would you rate the housing value in this neighborhood--that is, what you get for your money? Compared to other neighborhoods in the metropolitan area/county is the housing overpriced, is it about right, or is it a particularly good value?"	Bradburn, et al., 1970
	"Would you say that mortgage money is harder to get or easier to get in this neighborhood than elsewhere in the metropolitan area/county, or isn't there any difference?"	Bradburn, et al., 1970
	"Is the neighborhood you live in now nicer, about the same, or not as nice as that neighborhood?"	Butler, et al., 1969
	"How is this neighborhood different from your previous neighborhood?" Respondent was then asked, "Do you like this neighborhood better, about the same, or not as much as your previous neighborhood?"	Butler, et al., 1969

GLOBAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	For a respondent who lived in another neighborhood prior to moving to the present one, "Is the neighborhood you live in now nicer, about the same, or not as nice as that neighborhood?" was asked.	Butler, et al., 1969
	"Did you like or dislike the neighborhood that you lived in before moving here?"	Butler, et al., 1969
	"How about the neighborhood, do you think this neighborhood is nicer, not as nice, or about the same as the neighborhood you lived in before you moved here?"	Chapin, 1972
	"Which do you like better--Easter Hill or the last place you lived?" Respondent was then asked, "Why?"	Cooper, 1975
	"I think I'd be happier living in another part of Sydney." Response categories were: "agree and "disagree."	Troy, 1971
	"Compared to the last community you lived in would you say that for yourself, moving to this community has improved the quality of your life, has made it worse, or hasn't made much difference?"	Zehner, 1977
Pride in neighborhood	"Now, let's talk about how you regard this street as a place to live. Which statement on this card best describes how much this street feels like home to you?" Statements included: "I most definitely think of this street as home," "I think of this street as home," "I suppose I might consider this street as home," "I don't think of this street as home," and "I would never think of this street as home."	Appleyard, 1976
	"Some people think of themselves as being a part of a particular area in the city while others don't consider themselves part of such areas. Which sort of person are you most like?"	Atkinson, 1979
	"Do you think of this neighborhood as your real home or just a place to live?"	Barton, 1975
	"Would you recommend this development to a friend who was looking for a place to live?"	Becker, 1974
	"When you have visitors do you feel proud to show them the estate?" Respondent was asked why he feels this way.	Department of the Environment, 1972
	"How much of a sense of neighborhood or community feeling is there around here: a very strong sense, pretty strong, not too strong, or very little?"	Fried, 1973
	"Which of these statements comes closest to your feelings about this neighborhood: my neighborhood is just a place to live, or I really feel part of my neighborhood?"	Gollin, et al., 1975

GLOBAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"Do you think of this neighborhood as your home, or just a place you happen to live in?"	Rodgers, et al., 1975
	"Is there an area around here, where you are now living which you would say you belong to, and where you feel at home?"	Royal Commission on Local Government in England, 1969
	"If someone like myself were just moving to Sydney, I'd advise him to live near here if he could." Response categories were: "agree" and "disagree."	Troy, 1971
	"Which neighborhood do you think of as your real home--that is, where you really feel you belong: would you say this neighborhood, some other neighborhood in Baltimore, or some other neighborhood outside of Baltimore?"	Wilner, et al., 1962
Neighborhood change - past	"Do you feel this neighborhood as a place to live is changing for the better, the worse, or isn't it changing at all?"	Abt Associates, 1974
	"Do you think this neighborhood has gotten better or worse over the past two years?"	Ahlbrandt, n.d.
	"Over the past five years (since you have lived here), would you say that this area has become a better place to live, a worse place to live, or that it has stayed about the same?" If respondent answered "better" or "worse," he was asked, "Why do you feel that way?"	Atkinson, 1979
	"Would you say that in the last five years property values in this neighborhood have risen, stayed the same, or dropped?"	Bradburn, et al., 1970
	"How many dwelling units would you say have been built in the neighborhood since 1960?"	Bradburn, et al., 1970
	"How many dwelling units have been torn down in this neighborhood since 1960?"	Bradburn, et al., 1970
	"Would you say that there is a great deal or relatively little moving in and out of this neighborhood?"	Butler et al., 1969
	"What do you feel has been the major improvement in this neighborhood in the last few years?"	Chapin, 1972
	"How would you rate this neighborhood as a place to live this year as compared to last year? Would you say this neighborhood is now a better place to live, not as good a place to live, or the same as last year?"	NORC, 1974
	"Are there many people who move in and out of this neighborhood, a few or hardly any?"	Warren, 1977

GLOBAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"As far as I'm concerned, this is a nicer neighborhood to live in now than it was a few years ago." Response categories were: "agree strongly," "agree somewhat," "disagree somewhat," or "disagree strongly."	Zehner and Chapin, Jr., 1974
Neighborhood change - future	"In what ways, if any, do you think this area is likely to change over the next five years?" Response categories were: "a better place to live," "a worse place to live," or "stay about the same." If respondent said a better or worse place to live, he was asked, "Do you think you will like the area more or less if these changes occur?" Response categories were: "more," "less," or "no difference."	Atkinson, 1979
	"Do you think (name of development) will be a good place to live in the years to come?" Respondent was then asked, "Why do you feel this way?"	Becker, 1974
	"I would like your best guess as to whether during the next five years you think this neighborhood will remain about as it is, or will it change in some way?" If respondent said it will change, he was asked, "What do you think will happen?"	Bradburn, et al., 1970
	"Do you think that, during the next five years, this neighborhood will remain as it is, or that it will change in some way?" If the respondent said that the neighborhood will change, "What do you think will happen?" was asked.	Bradburn, et al., 1970
	"My neighborhood is becoming a nicer place to live." Response categories were: "agree strongly," "agree somewhat," "neither agree nor disagree," "disagree somewhat," and "disagree strongly."	Child in the City, 1978
	"Do you think that, over the next five years, this neighborhood will become a better place to live, become not as good a place to live, or stay the same?"	NORC, 1974
	"What do you think about the future of this neighborhood, say the next five years--do you think it will get better, stay about the same, or get worse?"	Rodgers, et al., 1975
	"Finally, what do you think this neighborhood will be like in five years? Will it be better than it is now, worse, or about the same?" Respondent was also asked why he said that and, "What do you think could be done to make it better?"	Zehner and Chapin, 1974
Moving to neighborhood	"When you decided to move to this residence, which was most important to you, this particular (house) (apartment), this street, or this neighborhood?"	Appleyard, 1976

GLOBAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"Think back to before you moved here. What were your reasons for moving here?"	Becker, 1974
	"Did you seriously consider other neighborhoods in which to live?" If respondent answered affirmatively, he was asked, "About how many?" and "Were all the other neighborhoods in this part of the metropolitan area/county, or were some in other parts of the metropolitan area/county?"	Bradburn, et al., 1970
	"Which was more important to you and your family when you decided to move here--this particular house/apartment or this particular neighborhood?"	Bradburn, et al., 1970
	Respondent was asked if he particularly wanted to come and live on the estate. If he answered affirmatively, "Why was this?" was asked. If respondent answered negatively, he was asked, "Why not?" and "How then did you come to be living here?" Response categories were: "waiting list," "transfer," "dwelling taken by council for slum clearance," "council wanted house for conversion" and "unfit dwelling."	Department of the Environment, 1972
	"If your circumstances had been the same and you had it to do over again, would you have moved to your address?" Respondent was then asked, "Why?" If respondent answered negatively, he was then asked, "What would you have done instead?"	Michelson, 1977
	"What were the most important factors that made you decide to move into this area?"	Quality of Life Project, 1977
	"What made you decide to move from your old locality?"	Troy, 1971
	"What (other) factors were important in your decision to move out of your previous place?"	Zehner, 1977
Moving from neighborhood	"Do you think that in 12 months you will definitely not move, may possibly move, or that you definitely will move?"	Abt Associates, 1974
	Respondent who said he wanted to move, was asked, "With \$50.00 more to spend on rent every month, would you stay in this neighborhood or not?"	Abt Associates, 1974
	If respondent said he thinks he will move three years from now, he was asked, "Why do you think you will move?" Response categories were: "change jobs," "better place," "better location," "time for a change," or "buy a place."	Academy for Contemporary Problems, 1975
	"Do you think that three years from now you will still be at this address or will you have moved?"	Academy for Contemporary Problems, 1975

GLOBAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"If you had your choice of where to live, would you continue living in this neighborhood?"	Ahlbrandt, n.d.
	"Would you like to stay here or move out of the neighborhood?"	Barton, 1975
	"Where do you think you and your family would be most likely to move--to another home in this neighborhood, another neighborhood in Boston, outside of Boston but in Massachusetts, elsewhere in the United States or outside of the United States?"	Boston Neighborhood Study, 1980
	"Do you have any plans to move in the next few years?" If respondent answered affirmatively, he was asked, "Why do you plan to move?" "When do you plan to move?", and "Where do you plan to move?"	Bradburn, et al., 1970
	"If for any reason, you had to move from here to some other neighborhood, would you be very unhappy, a little unhappy, or would you be happy to move--or wouldn't it make any difference?"	Bradburn, et al., 1970
	"Do you think that you will ever move from this place? Would you say definitely, probably, probably not, or definitely not?"	Butler, et al., 1969
	"What is the most important thing you will be looking for in a new neighborhood, that you feel you don't have here?"	Butler, et al., 1969
	"If you were to move from this neighborhood, what do you think you would miss the most?"	Butler, et al., 1969
	"Do you plan on moving or staying in this place during the next year or so?"	Chapin, 1972
	"How long do you expect to stay living here?" Response categories were: "a year or less," "several years," and "indefinitely."	Cooper, 1975
	"Thinking ahead to the next year or two, do you expect still to be living here, at the same residence, or do you expect to move?" Respondent was then asked, "Please look at this map, and tell me whether you expect to move to some area shown on the map--or do you expect to move somewhere else in Texas, out of Texas, or where?"	Dallas City Profile Survey, 1978
	"How likely is it that you will move out of this neighborhood in the next three years--very likely, fairly likely, or not likely at all?"	NORC, 1974
	"Have you considered moving from your present neighborhood?"	Peterson and Worrall, 1970

GLOBAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	If respondent said that he considered moving from the present neighborhood, he was asked, "Are there any reasons for moving other than personal ones?" Respondent was then asked, "What are they?" The response categories were: "dissatisfied with neighborhood," "change jobs," or "other."	Peterson and Worrall, 1970
	"Suppose you could have a house/apartment like this one in some other part of this city/county, would you prefer to live somewhere else or would you stay here?"	Quality of Life Project, 1977
	"How long have you lived in this neighborhood?" Response categories were: "less than one year," "1-2 years," "3-5 years," "6-10 years," and "greater than 10 years."	Peterson and Worrall, 1970
	"What is the main thing that keeps you from moving right now?"	Rodgers, et al., 1975
	"Supposing you had to move away from (the 'home' area), how sorry or pleased would you be?"	Royal Commission on Local Government in England, 1969
	"What sort of things are there that might make you want to leave this area?" Respondent was then asked, "If you were to move, what things would be most important to you in choosing a new neighborhood?"	Zehner and Chapin, 1974
Preferred/ideal neighborhood	"In what ways is this development different from your 'ideal' home?"	Becker, 1974
	"Assuming you could afford to live wherever you wished, are there neighborhoods other than this one you would like to live in?" If respondent answered affirmatively, he was asked, "What is there about those other neighborhoods that you like?" Responses was recorded verbatim and coded in the following categories: convenient to work, have friends or relatives there, appearance of the area, good schools, good recreation facilities, has the type of houses we want, shopping is convenient, the kinds of people living there and prestige or standing of neighborhood. If respondent mentioned more than one reason, he was asked, "Which one of these reasons would you say is most important?"	Bradburn, et al., 1970
	"Which would you prefer--a well established neighborhood or a new neighborhood?"	Butler, et al., 1969
	"Could you describe to me the ideal type of neighborhood you'd like to live in--if you didn't have to worry about money or paying the rent."	Cooper, 1975

GLOBAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"If there was housing in the suburbs that you liked and could afford, but you (or your husband/wife) had to spend more time and money on traveling to work than you do now, would you want to live there?"	Cooper, 1975
	"If you could live anywhere at all, what would be the ideal kind of neighborhood?"	Fried, 1973
	"What features are important to you in selecting a new neighborhood?" Responses included: "closer to shopping," "quieter," "less traffic," "closer to friends or relatives," "less crime," and "other."	Lawton, 1980
Length of residence	"How long have you lived in this neighborhood?" Response categories were: "less than one year," "1 to 2 years," "3 to 5 years," "6 to 10 years," and "11 years or more."	Academy for Contemporary Problems, 1975
	"First, about how long have you lived in this neighborhood?" Response categories were: "one year or less," "1.1 - 2.9 years," "3 - 4.9 years," "5 - 9.9 years," "10 - 19.9 years," "20 - 29.9 years" and "30 years or more."	Appleyard, 1976
	"How long do you think most people on this street have lived here?" Response categories were: "one year or less," "1.1 - 2.9 years," "3 - 4.9 years," "5 - 9.9 years," "10 - 19.9 years," "20 - 29.9 years" and "30 years or more."	Appleyard, 1976
	"How long have you lived in this area of the city?"	Atkinson, 1979
	"How long have you lived here at Easter Hill?" Response categories were: "six months or less," "more than six months, less than one year," "more than one year, less than 3 years," "more than 3 years, less than 5 years," and "five years or more."	Cooper, 1975
	"How long have you lived in this neighborhood? By neighborhood, I still mean within 5-10 minutes walking distance." Number of years and months was recorded.	Fried, 1973
	"Is this the same (neighborhood/community) you were living in the last time we spoke with you or have you moved to a different (neighborhood/community)?"	NORC, 1963
	"How long have you lived in this neighborhood?" Response categories were: "less than one year," "1-2 years," "3-5 years," "6-10 years," and "greater than 10 years."	Peterson and Worral1, 1970
	"Suppose you could have a house/apartment like this one in some other part of this city/county, would you prefer to live somewhere else or would you stay here?"	Quality of Life Project, 1977

GLOBAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"How long have you lived in this neighborhood?" Responses were recorded in years.	Quality of Life Project, 1977

PHYSICAL ENVIRONMENTAL MEASURES

CONCEPT	DESCRIPTION	SOURCE
Appearance/attractiveness	Interviewer was asked to rate the attractiveness of vacant lots as "very attractive," "somewhat attractive," "somewhat unattractive," and "very unattractive." Very attractive was defined as "adds to quality of segment--very clean, orderly appearance, well maintained, nearly complete ground cover, few weeds." Somewhat attractive was defined as "adds to quality of segment--moderately clean, shows some signs of maintenance, somewhat orderly appearance, incomplete ground cover, somewhat weedy." Somewhat unattractive was defined as "detracts from quality of segment--moderately littered, poorly maintained, sparse vegetation or overgrown with weeds." Very unattractive was defined as "detracts from quality of segment--heavily littered with paper, junk, or abandoned vehicles, not maintained, has dead vegetation, no vegetation, or heavily overgrown with weeds, pools of stagnant water, bulldozed, may be unsafe to walk through."	Abt Associates, 1974
	"Compared to the other streets in this area, how does your street look? Would you say it is very good, above average, average, below average, or very poor?"	Appleyard, 1976
	"Would you like to change anything about the appearance of your street?" If respondent answered affirmatively, he was asked, "What in particular would you like to change?"	Appleyard, 1976
	"Would you say this development is good looking, just o.k. or unattractive?" Respondent was then asked what about the development makes him feel this way.	Becker, 1974
	"In general, how would you rate the physical appearance of this neighborhood? Considering such things as the outside appearance of buildings, grass and trees, and the cleanliness of the area, is it superior, above average, average or below average?"	Bradburn, et al., 1970
	"In general, how would you rate the physical appearance of the entire neighborhood as compared to other neighborhoods in the metropolitan area/county? Considering such things as the outside appearance of buildings, grass and trees, and the cleanliness of the area, is it superior, above average, average, or below average?"	Bradburn, et al., 1970
	Interviewer was asked to describe the appearance of both the exterior of the respondent's home, and the street in general. Categories were: very attractive, attractive, average, unattractive, or very unattractive.	Butler, et al., 1969 Child in the City, 1978
	"Do you think this is an attractive neighborhood to look at?"	Cooper, 1975
	"Would you say that the overall appearance of this estate is attractive, all right, or unattractive?" Respondent was then asked why he said that.	Department of the Environment, 1972

PHYSICAL ENVIRONMENTAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	<p>"Would you say there is anything beautiful about this neighborhood?" Respondent who answered affirmatively was then asked, "What is it?"</p>	<p>Lansing and Hendricks, 1967</p>
	<p>"Would you say there is anything ugly about this neighborhood?" Respondent who answered affirmatively was then asked, "What is it?"</p>	<p>Lansing and Hendricks, 1967</p>
	<p>"When I go outside and look around me at the street and the neighbors' homes, I like what I see." Response categories were: "agree strongly," "agree somewhat," "neither agree nor disagree," "disagree somewhat," and "disagree strongly."</p>	<p>Lansing, et al., 1970 Troy, 1971</p>
	<p>Town planning students were asked, "How do you rate the overall visual impression of the development of the neighborhood?" Rating categories were: "very interesting," "interesting," "neutral," "uninteresting" and "very uninteresting."</p>	<p>Troy, 1971</p>
	<p>Town planning students were asked, "How do you rate the visual complexity of this environment?" Rating categories were: "very complex," "complex," "average," "simple," and "very simple."</p>	<p>Troy, 1971</p>
<p>Open space/landscaping</p>	<p>Interviewer was asked to rate the residential landscaping around building(s) or mobile home(s). Each yard was rated as "extensive," "high average," "low average," "minimal or none," "natural" or "no residential yards or grounds." Each yard was considered as a whole. Extensive was defined as "well planned, carefully arranged, almost showcase quality landscaping-complete ground cover, several trees, varied shrubs, and flowers." High average was defined as "fully landscaped-complete ground cover but may have small bare patches, worn in places, or have weedy portions: trees, varied shrubs and/or flowers in an orderly arrangement." Low average was defined as "an attempt at landscaping--complete to partial ground cover: at least a tree, shrubs and/or flowers, or no trees but an orderly arrangement of plantings." Minimal or none was defined as "barely landscaped or no landscaping: just a lawn, or no lawn at all, or lawn which is more dirt and weeds than grass, or sparse ground cover and only trees, or sparse ground cover and only a few scattered plantings." Natural was defined as "not planned but left in natural state--no planted ground cover, woodland-type plants, and mature trees."</p>	<p>Abt Associates, 1974</p>
	<p>"How do you feel about the amount of outdoor space near your home which members of your family can use for their different activities - do you people have more space than you need, or about the right amount, or too little space?" Respondent was then asked why he said so.</p>	<p>Lansing, et al., 1970</p>

PHYSICAL ENVIRONMENTAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	Trained observers were asked to indicate the adjacent land uses including open space and if open space were present, was it inaccessible or accessible.	Menchik and Knight, 1974
	Trained observers were asked to indicate the number of trees in each of the following categories: shade, sapling, and other.	Menchik and Knight, 1974
	"Have you enough outdoor space for family activities?"	Norcross, 1973
	Town planning students were asked, "How does the area rate for natural amenities, topography, views and so forth?" Rating categories were: "very interesting," "interesting," "neutral," "uninteresting" and "very uninteresting."	Troy, 1971
Building age	"Generally when were the first houses (apartments) built in this neighborhood?"	Bradburn, et al., 1970
	"Is there still some building of new housing going on in this neighborhood?" If respondent answered negatively, he was asked, "When were the last new houses (apartments) built here?"	Bradburn, et al., 1970
	"Are there other buildings or residences in your neighborhood which you feel are dangerous?"	City of Cincinnati, 1978
Building condition (see also upkeep/cleanliness/maintenance)	"What about buildings that detract from the quality of this neighborhood such as zoning violations, constructing improper buildings, or things of that type?" Response categories were: "very serious problem," "somewhat serious problem," "only a small problem," and "not a problem at all."	Dallas City Profile Survey, 1978
	"What about abandoned houses or other buildings in this neighborhood that are run-down or left open?" Response categories were: "very serious problem," "somewhat serious problem," "only a small problem," and "not a problem at all."	Dallas City Profile Survey, 1978
	Interviewer was asked to indicate the age of the respondent's structure and the three structures on each side of the respondent's structure but no more than 100 yards or so in both directions. Categories for each were: "less than five years old," "five to twenty-five years old," and "more than twenty-five years old."	Michaelson, et al., 1976, Marans and Wellman, 1978
	Interviewer was asked how the respondent's house or apartment building compares with others in the area. Rating categories were: "much better," "somewhat better," "about the same," "somewhat worse" and "much worse."	Quality of Life Project, 1977

PHYSICAL ENVIRONMENTAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
Upkeep/cleanliness/ maintenance	Interviewer was asked to rate the overall cleanliness of the segment as "very clean," "moderately clean," "moderately littered," or "heavily littered." Very clean was defined as "no litter or very little litter. One or two pieces scattered over the segment area." Moderately clean was defined as "small amount of litter scattered over the segment area and/or one of two yards with several pieces of litter or untidy objects." Moderately littered was defined as "considerable amount of litter scattered over the segment area and/or one or more yards with an accumulation of litter or untidy objects." Heavily littered was defined as "great deal of litter, and/or untidy objects scattered throughout the segment area."	Abt Associates, 1974
	"Now, I'd like to talk about the appearance and maintenance of this street. Which of the statements on that card describes how responsible you personally feel for the way this street looks and for what happens on it?" Response categories were: "extremely responsible," "quite responsible," "somewhat responsible," "only slightly responsible," and "not at all responsible."	Appleyard, 1976
	Respondent was asked to indicate how many residents on the street do each of the following activities: sweep and clean up the sidewalks, repair the sidewalks and keep them in good condition, keep up the buildings and maintain them in a good state of repair, take care of plantings along the street, and keep up the front yards and plantings around their homes. The response categories for each item were: "all do," "most do," "a few do," "hardly any do," and "none."	Appleyard, 1976
	"Which statement best describes the way the buildings, sidewalks and front yards are kept up by the people who live on this street: very well kept up, fairly well kept up, satisfactory, not very well kept up, or not at all kept up?"	Appleyard, 1976
	"What about the condition of the houses in this neighborhood. Overall, would you say they are very well kept up, fairly well, not very well, or not kept up well at all?"	Campbell, et al., 1976, Michaelsen, et al., 1976
	"Do you feel that the Housing Authority takes good care of Easter Hill-the outsides of the houses, the streets, etc.?"	Cooper, 1975
	"Do you have any problems with rats, mice, or other small rodents?" Response categories were: "very serious problem," "somewhat serious problem," "only a small problem," and "not a problem at all."	Dallas City Profile Survey, 1978

PHYSICAL ENVIRONMENTAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"Do you have any problems with mosquitoes, flies, or pests of that kind?" Response categories were: "very serious problem," "somewhat serious problem," and "only a small problem," and "not a problem at all."	Dallas City Profile Survey, 1978
	"What about junked or abandoned cars-is this a very serious problem, a somewhat serious problem, only a small problem, or not a problem at all?"	Dallas City Profile Survey, 1978
	"What about vacant lots that are not taken care of - what kind of problem is this in your neighborhood? Is this a very serious problem, a somewhat serious problem, only a small problem, or not a problem at all?"	Dallas City Profile Survey, 1978
	"Would you say that the way the estate is looked after and maintained is satisfactory, all right, or unsatisfactory?" Respondent was asked what was wrong, and how he thought it could be improved.	Department of the Environment, 1972
	"During the past 12 months, did you or members of your household see any rats on your block? If respondent answered affirmatively he was asked how many times rats were seen. Response categories were: "no, never," "yes, 1 or 2 times," "yes, 3 or 4 times," "yes, 5 or 6 times," and "yes, - times,"	Hatry, et al., 1977
	"Turning now to neighborhood cleanliness, would you say your neighborhood is usually very clean, fairly clean, fairly dirty, or very dirty?"	Hatry, et al., 1977, Dallas City Profile Survey, 1978
	Interviewer was asked "Generally, how well kept up are the structures in respondents neighborhood?" Categories were: "very well kept up," "mixed - could use paint jobs," "poorly - need painting and minor repairs," and "very poorly - dilapidated."	HUD, 1978
	Observers were asked to determine the degree of trash or junk accumulation. Categories were: "poor, obvious accumulation, of litter, glass and junk," "fair, small amounts of litter visible, but no glass or junk" and "good, no obvious litter, glass or junk in streets or yards."	Kain and Quigley, 1969
	"What about the conditions of the houses in this neighborhood - would you say they are well kept up, fairly well kept up, not very well kept up, or not kept up well at all?"	Lawton, 1980
	Interviewer was asked to indicate how well kept up and cared for were the yards and/or sidewalks in front of the respondent's structure and the yards and sidewalks on each side of the respondent's structure. Categories were: "very well," "fairly well," "poorly," and "very poorly."	Michaelsen, et al., 1976

PHYSICAL ENVIRONMENTAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	Interviewer was asked how well kept up was the respondent's structure and how well kept up the three structures on each side of the respondent's structure but no more than 100 yards or so in both directions. Categories were: "very well," "average-might need paint," and "poor-dilapidated."	Michaelsen, et al., 1976, Marans and Wellman, 1978
	"Would you say that public property in your vicinity is maintained very well, well, neither well nor poorly, poorly, or very poorly?"	Michelson, 1977
	"Would you say that the surrounding properties within sight are maintained very well, well, neither well nor poorly, poorly, or very poorly?"	Michelson, 1977
	"How many of the houses and buildings in the neighborhood appear to need some paint, repairs or some work done on the yard?" Response categories were: "none," "A few," "several," and "most."	Quality of Life Project, 1977
	"How well do you feel the (project) (neighborhood) is kept up, that is, in the way it looks: would you say it is very well kept up, fairly well, rather poorly, or very poorly kept up?"	Wilner et al., 1962
	"How interested are you in keeping up the (project) (neighborhood) that is, in the way it looks: would you say you are very interested, fairly interested, not much interested, or not at all interested?" If respondent was "very interested" or "fairly interested," "What have you done to keep it up?" was asked.	Wilner, et al., 1962
	"A number of people have indicated that one of the more important things about a neighborhood is how well kept up it is. As far as you're concerned, what would the main reason be that a well kept up neighborhood is important?" Respondent was handed a card with the following choices: "helps keep the property values up," "indicated that the people there would probably be good neighbors," "makes the neighborhood look better and more attractive," and "something else (specify)."	Zehner, 1977
Density/crowding	"Would you say that living on this estate there are too few people, too many people, or just the right number of people?" Respondent was then asked to write in why he said that.	Department of the Environment, 1972

PHYSICAL ENVIRONMENTAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	<p>Interviewer was asked to indicate, "How far is it from respondent's house to the nearest next house (on either side or across the road)?" Categories were: "Less than 15 feet (less than 1 car length)", "15 to 29 feet (1 to 2 car lengths)", "30 to 49 feet (2 to 3 car lengths)", "50 to 99 feet (3 to 6 car lengths)," and "100 feet or more (more than 6 car lengths)."</p>	<p>Marans and Wellman, 1978</p>
	<p>Interviewer was asked to indicate the extent to which the area immediately surrounding the respondent's dwelling was built up. Four plan diagrams were used to represent the number of structures surrounding that of the respondent. The following categories were indicated next to each diagram: "Entirely built up with buildings, no open space present except that associated with privately owned buildings," "Mostly built up with buildings, some open spaces present such as vacant lots, open fields, and underdeveloped fields and wetlands," "Sparsely built up with buildings, mostly open space present such as vacant lots, open fields and underdeveloped woods and wetlands," and "All open space, respondent's dwelling is the only building within the area."</p>	<p>Marans and Wellman, 1978</p>
	<p>"How satisfied are you with the distance between dwellings." A show card with a seven-point scale was presented to the respondent. Response categories ranged from "completely satisfied" to "completely dissatisfied."</p>	<p>Marans and Wellman, 1978</p>
	<p>Trained observers were asked to indicate the degree to which the residential density in the surrounding "micro-neighborhood" was higher or lower. A seven point rating scale was used.</p>	<p>Menchik and Knight, 1974.</p>
	<p>"Do you feel there are too many families living too close to you?"</p>	<p>Norcross, 1973</p>
	<p>"Taking account of the value of land and living conditions, do you regard the density of housing here as too high, satisfactory, or too low?"</p>	<p>Troy, 1971</p>
<p>Air pollution</p>	<p>"Do you think the quality of air in Columbus today is better, about the same, or worse than it was 3 years ago?"</p>	<p>Academy for Contemporary Problems, 1975</p>
	<p>If respondent felt that air pollution was a problem, he was asked, "What type of air pollution is a problem in this neighborhood?" Response categories were: "dust," "unpleasant odors, smells," "haze or smog," "general bad quality of air," "traffic or auto pollution," and "industrial pollution."</p>	<p>Dallas City Profile Survey, 1978</p>

PHYSICAL ENVIRONMENTAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"Would you say that the amount of air pollution in your neighborhood is very noticeable, fairly noticeable, somewhat noticeable, slightly noticeable or not noticeable?"	Jacoby, 1971
	"Comparing your neighborhood to other neighborhoods in Detroit, would you say that your neighborhood has much more air pollution, quite a bit more air pollution, slightly more air pollution, slightly less air pollution, quite a bit less air pollution or much less air pollution."	Jacoby, 1971
	Observer was asked to indicate existence of specific nearby air pollution sources.	Menchik and Knight, 1974
Noise/hearing neighbors	"Compared to most other streets in this area of San Francisco, how noisy would you say your street is? Would you say it is much more noisy than most, a little more noisy than most, about the same as most, a little less noisy than most, or much less noisy than most?"	Appleyard, 1976
	Interviewer was asked to rate the respondent's neighborhood as being either very quiet, average amount of noise, or noisy.	Butler, et al., 1969, Burby, 1971
	"First(what about the level of noise in this neighborhood is it a very serious problem, a somewhat serious problem, only a small problem, or not a problem at all?" If respondent indicated that noise is a problem, "What type of noise is a problem in this neighborhood?" was asked. Response categories were: "traffic noise," "industrial or factory noise," "aircraft noise," "people or children," "animals," "general noise (unspecified)," and "other noise not listed above."	Dallas City Profile Survey, 1978
	"Summing up your feelings would you say that you find noise here: not a nuisance, rather a nuisance or a great nuisance."	Department of the Environment, 1972
	Respondent was asked if he hears noise from outside. If he answered affirmatively, and that it is bothersome, a record was made of the cause of the noise, whether or not it was bothersome, and when it was bothersome. The response categories were: "frequently" or "infrequently," and "early morning (5-8)," "during the day (8-5)," "early evening (5-8)," "evening (8-11)," "at night (11-5)," and "day and night."	Department of the Environment, 1972
	"Do you hear any noise from children playing outside?" If respondent answered affirmatively, he was asked to write where it comes from, and to indicate if it is bothersome.	Department of the Environment, 1972

PHYSICAL ENVIRONMENTAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"Concerning the amount of noise in your neighborhood, would you say that your neighborhood is very noisy, fairly noisy, somewhat noisy, fairly quiet, or very quiet?"	Jacoby, 1971
	"Comparing your neighborhood to other neighborhoods in Detroit, would you say that your neighborhood is much noisier quite a bit noisier, slightly noisier, slightly quieter, quite a bit quieter or much quieter?"	Jacoby, 1972
	"Some houses are close enough together so that when people are indoors they hear their neighbors and their neighbors hear them. How much do you and your neighbors hear each other?" Response categories were: "quite a bit," "somewhat," "very little," "not at all."	Lansing and Hendricks, 1967
	"How much do you care whether you hear each other - a great deal, somewhat, or don't you care?"	Lansing and Hendricks, 1967
	"How satisfied are you with the peace and quietness of the neighborhood: are you not very satisfied, fairly satisfied, or very satisfied?"	Lawton, 1980
	"How satisfied are you with how quiet or noisy this neighborhood is?" Response categories on a seven-point scale ranged from "completely satisfied" to "completely dissatisfied."	Marans and Wellman, 1978
Traffic noise	"Do you hear noise from traffic at all?" If respondent answered affirmatively, he was asked where it comes from.	Department of the Environment, 1972
	"Will you please stick in one of the boxes on this card what you think of traffic noise conditions where you live?" A card was shown with a seven point scale from "definitely satisfactory" to "definitely unsatisfactory." If respondent answered unsatisfactory (5, 6, 7), he was asked, "When does the traffic noise bother you?" A card was shown with the following response categories: "early morning (5 up to 8)," "during the day (8 up to 5)," "early evening (5 up to 8 p.m.)," "evening (8 up to 11)," "at night (11 up to 5 a.m.)," "all the time," "frequently," and "infrequently."	Department of the Environment, 1972

PHYSICAL ENVIRONMENTAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
Traffic safety (see also SOCIOCULTURAL MEASURES)	<p>"During the last 12 months, have you ever been bothered by traffic noise or construction noise in this neighborhood?" If respondent answered affirmatively, he was asked, "On the average, were you bothered by this noise almost daily, at least once a week, or only once in a while?" Response categories were: "no, never," "yes, almost daily," "yes, at least once a week," and "yes, only once in a while." If respondent answered that he was bothered by noise, "What seems to cause the most noise?" was asked and responses were coded in the following categories: "no specific thing," "general traffic," "motorcycles," "trucks," "construction," and "other."</p>	Hatry, et al., 1977
	<p>Respondent was asked to rate the traffic noise in the locality close to where he lived. Response categories were: "very good," "good," "average," "poor," and "very poor."</p>	Troy, 1971
	<p>"Some people in the city feel that their streets are dangerous, while other people think they are safe. Which of the statements on this card best describes the situation on this street and around your house with respect to danger from traffic?" Response categories were: "very safe," "quite safe," "neither safe, nor dangerous," and "very dangerous."</p>	Appleyard, 1976
	<p>Respondent was read a list of potential traffic hazards and asked if he knew of each in his neighborhood. The list included: "First are there any street or traffic signs in your neighborhood that are missing or damaged?" "Are there any walk lights in your neighborhood timed in such a way that you or a member of your household do not feel safe when crossing a street?" "Are there any schools or playgrounds in your neighborhood which have too few signals or signs to warn drivers to watch for children?"</p>	City of Cincinnati, 1978
	<p>"Are there any walk lights in your neighborhood timed in such a way that you or a member of your household do not feel safe while crossing the street."</p>	City of Cincinnati, 1978
	<p>"Are there any schools or playgrounds in your neighborhood which have too few signals or signs to warn drivers to watch for children?"</p>	City of Cincinnati, 1978
	<p>Respondent was asked to describe the street on which he lived to be "very busy main street - e.g., Reading Rd., Clifton Ave., Glenway," "a somewhat busy secondary street," or "a side street, residential street."</p>	City of Cincinnati, 1978
	<p>"Are there any traffic signals in your neighborhood that hinder the flow of traffic because they are too long or too short?"</p>	City of Cincinnati, 1978

PHYSICAL ENVIRONMENTAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"Would you say that children are safe from traffic while playing on this estate?" Respondent was asked to write in why he says that.	Department of the Environment, 1972
	Trained observers were asked to indicate the "micro-climate" traffic level on the street categories ranging from "light" to "heavy" on a seven-point scale."	Menchik and Knight, 1974
	"Is car traffic near you a bother?" Response categories were: "very much," "somewhat," and "no bother."	Norcross, 1973
	Town planning students were asked, "How do you rate the traffic safety in this locality?" Response categories were: "very good," "good," "average," "poor," and "very poor."	Troy, 1971
	Respondent was asked to rate the locality close to where he lived on traffic safety. Response categories were: "very good," "good," "average," "poor," and "very poor."	Troy, 1971
Animals/pets	"Are loose or stray animals a very serious problem, somewhat serious problem, only a small problem, or not a problem at all?"	Dallas City Profile Survey, 1978
Land use	Interviewer was asked to estimate the percent of each land use in the segment. The land uses were: residential, mixed residential/commercial, commercial: shops and stores, gas stations, theaters, professional offices, office buildings, non-consumer establishments: railroad tracks or yards, wholesale outlets, warehousing, light manufacturing, heavy industry: mills, foundries, large scale manufacturing, institutional: schools, hospitals, churches, cemeteries, government buildings, vacant lots, parks, playground, playing fields, auditorium, arena, recreation center, lodge hall, separate parking lots-paved or unpaved, farmland, unimproved land, woodland, swampland, and bodies of water or dry beds: stream, river, pond, lake.	Abt Associates, 1974
	Interviewer was asked, "Look at 3 structures on each side of DU but not more than 100 yards or so in both directions and check as many boxes as apply, below." Categories included: vacant land only, trailer, detached single family house, 2-family, 2 units side by side, 2family house, 2 units one above the other, detached 3-4 family house, row house (3 or more units in an attached row), apartment house (5 or more units, 3 stories or less), apartment house (5 or more units, 4 stories or more), apartment in a partly commercial structure, wholly commercial or industrial structures, park, and school or other governmental building.	Campbell, et al., 1976 Michelson et al., 1976

PHYSICAL ENVIRONMENTAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	<p>Trained observers were asked to indicate which of the following are dominant adjacent land uses: 1-family detached, duplexes, townhouses, low rise apartments, high rise apartments, local streets, arterial streets and roads, quiet "residential-like" commercial, industrial, institutional, less quiet, visually contrasting commercial, industrial, institutional, and open space inaccessible, and open space accessible, and open space - public.</p>	<p>Menchik and Knight, 1974</p>
	<p>Town planning students were asked to indicate, "What is the mixture of land uses in the locality?" as "none," "a little," "common," "predominant," and "all" for the following list of land uses: detached houses, semi-detached houses, terrace houses, flats, industrial, small shops, large shops, commercial, pubs, schools, parks, and vacant land.</p>	<p>Troy, 1971</p>
	<p>Town planning students were asked, "How do the rate the intermingling of residential and other land uses?" Categories were: "complementary," "neutral," and "incompatible."</p>	<p>Troy, 1971</p>

LOCATIONAL MEASURES

CONCEPT	DESCRIPTION	SOURCE
Ratings of location/ convenience	"How convenient is your new house or apartment to places where you work or could work? Would you say it is very convenient, somewhat convenient, somewhat inconvenient or very inconvenient?"	Abt Associates, 1974
	Respondent was given a list of neighborhood services and characteristics including distance to grocery shopping and asked to rate each. Response categories were: "excellent," "satisfactory," "needs minor improvements," or "needs major improvements." Depending on the response, one of two open-ended questions was asked: "What improvement is needed?" or "What is especially good about it?"	Becker, 1974
	"Now I have some questions about this neighborhood. First, thinking about the kinds of things you would like to have near where you live - places you go fairly often - how convenient would you say this location is: is it very convenient, convenient enough, not very convenient, or not convenient at all?"	Campbell, et al., 1976, Michaelsen, et al., 1976, Marans and Wellman, 1978
	"Is it convenient for you to get to the shops from here?"	Cooper, 1975
	"Would you say you live, too far from a large city, closer in than you would prefer, or at about the right distance?"	Fried, 1973
	How convenient is this place for visiting with friends? Is it very convenient, fairly convenient, or not very convenient?"	Lawton, 1980
	"How convenient is this neighborhood for shopping and getting the things you need? Is it very convenient, fairly convenient, or not very convenient?"	Lawton, 1980
	"Overall, how would you describe your feelings about your present location itself? Would you say you are definitely satisfied, mostly satisfied, neither satisfied nor dissatisfied, mostly dissatisfied or definitely dissatisfied?"	Michelson, 1977
	"What do you particularly like about this present location?"	Michelson, 1977
	"Has the location fit your expectations?" Respondent was then asked what his/her expectations were about the location.	Michelson, 1977
"How convenient would you say the location of this store is - is it very convenient, pretty convenient, not too convenient, or not at all convenient?"	NORC, 1974	

LOCATIONAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
Preferred/Ideal location	<p>"We are interested in how convenient living in this location is for you and your family. Please put ticks on the sheet to show whether this locality is very convenient, very inconvenient, or somewhere in between for shopping - and the other things on the list." Other response categories were "convenient," "average," and "inconvenient." The list included: shopping, getting to work, schools, public transport, church, friends and relatives, entertainment, clubs and pubs, and outdoor recreation facilities. Respondent was also asked, "Considering everything how do you and your family regard this as a place to live?"</p>	Troy, 1971
	<p>Respondent was asked if the location for the grocery store is important or not important in deciding where to shop.</p>	Academy for Contemporary Problems, 1975
	<p>"What about your location within the development? If you had your choice, would you stay right where you are, or move to some other part of it?" If respondent said he would move to some other part of it, he was asked, "Would you move to a different building, a different level, or a different side?" and "Why?"</p>	Becker, 1974
	<p>"If you were to move, would you rather be closer, about the same, farther away (from the following places), or doesn't it make any difference?" The places were: your grocery shopping, the home of your best friend, an elementary school, downtown, a shopping center, a park or playground, hospital or clinic, and place of work.</p>	Butler et al., 1969
	<p>"If you could do as you please, would you like to live closer to the center of Detroit or just where you are?"</p>	Lansing and Hendricks, 1967
	<p>"Is your present location more similar to the ideal than your previous one?" "Why do you feel that way?" Respondent was also asked, "How would you change your present location to make it more similar to your ideal?" and "In what ways does it differ from this ideal?"</p>	Michelson, 1977
	<p>"There are many features that people find desirable in choosing a new home. Which of these were in any way at all a factor in your choice?" Among the items considered were: parking problems, location and quality of schools, location of transportation facilities too far, location of transportation facilities too close, distance to the downtown area too far, distance to the downtown area too close, distance to relatives too far, distance to relatives too close, distance to friends too far, distance to friends too close, distance to job/work too far, distance to job/work too close, distance to country/open green spaces too far, and distance to country/open green spaces too close.</p>	Michelson, 1977

LOCATIONAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	<p>"Did you seriously consider a different type of housing and/ or a quite different location?" If respondent answered affirmatively, he was asked, "What housing type and/or location did you consider?" and "Why did you reject it?"</p>	Michelson, 1977
	<p>"If you moved to another area would you give more, less, or the same consideration to the location of activities, such as mentioned in this survey (local shopping center, emergency hospital, children's park and playground, and elementary school), than you did in selecting your present home?"</p>	Peterson and Worrall, 1970
<p>Distance to services/ facilities/jobs (see also SERVICES/ FACILITIES MEASURES)</p>	<p>"About how many minutes does it take you to get from the place you live to where you do most of your grocery shopping?"</p>	Abt Associates, 1974
	<p>"About how many minutes from your home is the closest place to buy groceries?" Response categories were: "Less than 5" and "5 or more."</p>	Academy for Contemporary Problems, 1975
	<p>"Is this facility (used most often for respondent's favorite activity) located in your neighborhood?"</p>	Academy for Contemporary Problems, 1975
	<p>Respondent was asked, "How many minutes at rush hour it would take to get from your house to each of these medical facilities by car?" Facilities included: Nearest emergency medical facility, doctor of your choice, and hospital of your choice. Response categories were: "less than 5 minutes," "5 to 10 minutes," "10 to 15 minutes," "15 to 20 minutes," "20 to 30 minutes," "30 minutes or more," "wouldn't go," and "don't know where."</p>	Academy for Contemporary Problems, 1975
	<p>"How long does (would) it take the main wage earner to walk from home to the nearest public transportation stop?" Response was recorded in minutes to walk.</p>	Atkinson, 1979
	<p>Respondent was asked, "When you acquired this lot/tract of land, about how far was it from your shoreline property to each of the following items: your primary residence (where you lived most of the year), your/head's place of work, a place where you could buy groceries, the nearest public elementary school, a business area with department stores, entertainment, banks, and so on, emergency medical facilities, a place to launch a boat from a trailer, a shoreline marina where you could get equipment for a boat, gasoline, boat repairs, and so on, a church you would feel comfortable attending, your nearest friend around the lake, and the nearest fire station. Distances were recorded to the nearest quarter of a mile.</p>	Burby, 1971

LOCATIONAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	<p>"What types of recreation facilities were available or promised by the developer?" Respondent was asked to indicate if the following were available, promised, or not available: "community playfield or area for the children," "community swimming pool," "community picnic area," "community club house," and "community bathing beach."</p>	Burby, 1971
	<p>"Next, I'd like to know about how convenient this location is for you. About how many minutes does it take you to get from here to ___?" The number of minutes were recorded for the following items: The place where you do most of your grocery shopping, the home of your best friend, an elementary school, downtown, a shopping center, a park or playground, your doctor's office, a hospital or clinic, and place of work.</p>	Butler et al., 1969
	<p>Does this neighborhood include any ___?" Items included: public elementary schools, shops, park or playground, teenage recreation center, doctor's office, factory or industry, church or day care center.</p>	Butler et al., 1969
	<p>The following question was asked for families where the youngest child was 1 1/2 and over but under 5, and for families where the oldest child was 5 and over but under 11: "Is there a park, heath or common near here where young children can play?"</p>	Department of the Environment, 1972
	<p>"Is there any form of local public transportation available to you here (not taxi cabs)?"</p>	Campbell, et al., 1976
	<p>"Is there a community mental health facility in your neighborhood?" If respondent answered affirmatively, he was asked the name of the facility.</p>	Dear and Taylor, 1979
	<p>Respondent was asked to indicate the closest intersection of the location of a community mental health facility, if it existed in the neighborhood.</p>	Dear and Taylor, 1979
	<p>"How long does it take you to get to work, approximately how many minutes?"</p>	Fried, 1973
	<p>"Is the nearest public elementary school within the neighborhood, not in the neighborhood but convenient, or not in the neighborhood and inconvenient."</p>	Fried, 1973
	<p>"How long does it usually take to get (to the grocery store) from here (one way)?" Response categories were: "less than 5 minutes," "5-9 minutes," "10-14 minutes," "15-19 minutes," "20-29 minutes," "30-39 minutes," and "40 minutes or more."</p>	Lansing, et al., 1970

LOCATIONAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	<p>"Is there a public playground or public park or a school yard within walking distance of your home?" If respondent answered affirmatively, he was asked "What are the names of the two streets at the nearest intersection to it?" and "About how many blocks from here is that - one block or less, two or three blocks, four or five blocks, or six blocks or more?"</p>	<p>Lansing and Hendricks, 1967</p>
	<p>Following a question about availability of public parks or schoolyards within walking distance of the respondent's home, he was asked if the children use the (park) space. If he answered affirmatively, "How satisfactory is this a place for your children to play?" was asked, and why. response categories were: "very satisfactory," "satisfactory," "unsatisfactory," or "very unsatisfactory." If it was not used, respondent was asked "Are there special reasons why your children don't use this space?"</p>	<p>Lansing and Hendricks, 1967</p>
	<p>"Is there a bus stop within a 10 minute walk of your home?"</p>	<p>Lansing, et al., 1979, Zehner, 1977</p>
	<p>"Is this (house/apartment) within 4 blocks (or a ten minute slow walk) of a grocery store or supermarket?"</p>	<p>Lawton, 1980</p>
	<p>"Is this (house/apartment) within four blocks (or a ten minute slow walk) of public transportation?"</p>	<p>Lawton, 1980</p>
	<p>"Do you have a park and/or playground in your community?"</p>	<p>Michaelsen, et al., 1976</p>
	<p>"How long would it take to walk to the closest park/playground?"</p>	<p>Michaelsen, et al., 1976</p>
	<p>"About how far away is the store you shopped at most recently/where your family did most of its grocery shopping during the past month?" Response categories were coded: less than 1/4 mile, 1/4 to less than 1/2 mile, 1/2 to less than 2 miles, 2 to less than 5 miles, 5 to less than 10 miles, 10 miles to less than 20 miles, and 20 miles or more.</p>	<p>NORC, 1974</p>
	<p>"Is there a park or playground near here where young children can play?" For those who answered affirmatively, the question was asked "About how many minutes would it take a child to walk there from your front door?"</p>	<p>Rodgers, et al., 1975, Zehner, 1977</p>

SERVICES/FACILITIES MEASURES

CONCEPT	DESCRIPTION	SOURCE
Education facilities - ratings (see also LOCATIONAL MEASURES)	"Do you feel the public schools in this area are somewhat better, about the same, or somewhat worse than three years ago?"	Academy for Contemporary Problems, 1975
	Following questions regarding the schools which respondent's children attend and if it is in the neighborhood, the following question was asked, "Is (name of school) below capacity, just at capacity, or is it slightly overcrowded?"	Bradburn, et al., 1970
	Following questions regarding the schools which respondent's children attend, the question, "Would you say that the physical plant is superior, above average, average, or below average?" was asked.	Bradburn, et al., 1970
	Following a question regarding the schools which respondent's children attend, the question, "Would you say the teaching and educational program at (name of school) are superior, above average, average, or below average?" was asked.	Bradburn, et al., 1970
	Following a question regarding the schools which respondent's children attend, the question, "How about extracurricular activities such as sports, music, and social events? Would you say these are superior, above average, average, or below average?" was asked.	Bradburn, et al., 1970
	Following a question regarding the schools which respondent's children attended, the question, "Taking everything into account, then, how would you rate this school? Is it superior, above average, average, or below average?" was asked.	Bradburn, et al., 1970
	Following a question regarding the schools which respondent's children attend, the question, "Do the children get along pretty well with each other, or are there tensions between some of the children?" was asked. If respondent said there were tensions, he was asked what causes them.	Bradburn, et al., 1970
	Following a question regarding the schools which respondent's children attend, the question, "Were you or your child(ren) dissatisfied in any way with (name of school) in the past year?" was asked. If respondent answered affirmatively, he was asked why.	Bradburn, et al., 1970
	"How would you rate the public schools in this neighborhood this year as compared to last year? Would you say the public schools are now better, not as good, or the same as last year?"	NORC, 1974
	"Have you ever heard about the children who live around here being afraid to go to school because other students might hurt them in some way?"	Rodgers, et al., 1975

SERVICES/FACILITIES MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	<p>"In the public grade school which children around here attend, how many of the teachers would you guess are white; all of them, almost all of them, most, more than half, about half, less than half, almost none, or none at all?"</p>	Rodgers, et al., 1875
	<p>"How do you feel about the quality of public schools that the children from around here go to. Would you say it is very good fairly good, neither good nor bad, not very good or not good at all?"</p>	Rodgers, et al., 1975, Campbell, et al., 1976, Michaelsen, et al., 1976, Marans and Wellman, 1978
	<p>"Here is a list of problems that sometimes come up in schools. For each of the items on the list would you tell me if, in your opinion, it is a serious problem at (name of school), somewhat a problem, or not a problem?" The list included: students disrupting school or causing trouble; racial conflict or hostility; students using drugs during or after school hours; and students drinking during or after school hours.</p>	Zehner, 1977
	<p>"Do you think (name of school) spends too much time on new kinds of teaching methods and courses, no enough time on that sort of thing or is it about right?"</p>	Zehner, 1977
	<p>"Would you say that most of the teachers your child has at that school are excellent, good, average, below average, or poor?"</p>	Zehner, 1977
	<p>"In general, how do you think your child feels about going to school - do you think (he/she) dislikes it very much, dislikes it somewhat, likes it somewhat, likes it very much, or doesn't care about it one way or the other?"</p>	Zehner, 1977
Educational facilities - use	<p>Respondent was asked the name of the school their child attends and the town in which it is located. "How does your child usually get to that school?" was then asked. Response categories were: "walk," "bicycle," "car," "school bus," and "other."</p>	Zehner, 1977
	<p>Following questions regarding the name, location and means of transportation to child's school, respondent was asked, "And about how many minutes does it take (him/her) to get there?" Responses were recorded in minutes.</p>	Zehner, 1977
Health/medical facilities - ratings	<p>Respondent was given a list of neighborhood services and characteristics including medical services and asked to rate each as "excellent," "satisfactory," "needs minor improvement," or "needs major improvement." Depending on the response, either one of two open-ended questions was asked: "What improvement is needed?" or "What is especially good about it?"</p>	Becker, 1974

SERVICES/FACILITIES MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"What is your opinion of the mental health facility in your neighborhood? Are you in favor, opposed, or indifferent?" "Why are you in favor of/opposed to the facility?"	Dear and Taylor, 1979
	"How do you feel about the quality of the health and medical facilities around here?" Response categories were: "very good," "fairly good," "average," "below average," or "poor?"	Marans and Wellman, 1978
	"Overall, how good would you say health care facilities and services are for people who live in this community - excellent, good, average, below average, or poor?"	Zehner, 1977
Police/fire protection	"Let's talk about Police Services now. During an average week how often do you see the police on your street in a patrol car?" Response categories were: "more than once a day, 8 or more times," "once a day, 7 times," "5 or 6 times," "3 or 4 times," "1 or 2 times," and "not at all."	City of Cincinnati, 1978
Police/fire protection - ratings	"Is the police protection very adequate, somewhat adequate, or not at all adequate to cope with the level of crime?"	Bradburn, et al., 1970
	"Do you feel the police do a good job here?"	Cooper, 1975
	"In general, are the Dallas police fair or unfair in the way they treat people in this neighborhood?" Response categories were: "fair," "depends," and "unfair."	Dallas City Profile Survey, 1978
	"Do you think the amount of police patrolling in your neighborhood is too much, about right, or is not enough?"	Hatry, et al., 1977
	"Would you say, in general, that your local police are doing a good job, an average job, or a poor job?"	LEAA, 1978
	"And what about fire protection around here?" Response categories were: "very good," "fairly good," "neither good nor bad," "not very good," and "not good at all."	Marans and Wellman, 1978
	"How about police protection around here?" Response categories were: "very good," "fairly good," "neither good nor bad," "not very good," and "not good at all."	Michaelsen, et al., 1976, Marans and Wellman, 1978
Public transportation - ratings	Respondent was given a list of neighborhood services and characteristics including public transportation and asked to rate each. Response categories were: "excellent," "satisfactory," "needs minor improvement," or "needs major improvement." Depending on the response, one of two open-ended questions was asked: "What improvement is needed?" or "What is especially good about it?"	Becker, 1974

SERVICES/FACILITIES MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"How good is the public transportation for people who live around here? Is it very good, fairly good, neither good nor bad, not very good, or not very good at all?"	Campbell, et al., 1976
	"How important is it to you whether there is a bus stop near your home." Response categories were: "very important," "fairly important," and "not important at all."	Lansing, et al., 1970
	"Would you say the local bus system in this community is satisfactory or do you think it ought to be improved?"	Lansing and Hendricks, 1967
	"All things considered, how satisfied are you with the public transportation around here? Are you very satisfied, fairly satisfied, or not very satisfied?"	Lawton, 1980
Recreation facilities - ratings (see also LOCATIONAL MEASURES)	"Are you or your family dissatisfied with the recreational facilities here?" If respondent answered affirmatively, he was asked, "In what way?"	Bradburn, et al., 1970
	"What about the parks and playground for children in this neighborhood? Are they very good, fairly good, neither good nor bad, not very good, or not good at all?"	Campbell, et al., 1976 Michaelsen, et al., 1976
	The following question was asked to all households with children a year and a half and over but under 16 years old: "Taking everything into consideration would you say that children's play on this estate is a great problem, rather a problem or no problem?"	Department of the Environment, 1972
	The following question was asked to households with no children a year and a half and over but under 16 years old: "Do you think that children's play on this estate is a great problem, rather a problem, or no problem." If respondent answered that it was a problem, he was asked to write in why it is a problem, and what he thought could be done to improve things.	Department of the Environment, 1972
	"Would you say that the play provision on or near the estate for children under 11 was satisfactory, all right, or unsatisfactory." If respondent answered "unsatisfactory," he was asked to write in how it could be improved.	Department of the Environment, 1972
	"Do you think anything needs to be provided on the estate for these older children? If respondent answered affirmatively, he was asked to write in what was needed.	Department of the Environment, 1972
	"How would you rate the pool, park and recreational opportunities in your neighborhood?" Response categories were: "excellent," "good," "fair," and "poor." If respondent answered "poor," he was asked "Would you tell me why you say that, please?"	Hatry, et al., 1977

SERVICES/FACILITIES MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"Now, we would also like to know how your household would rate the park and recreation opportunities in your immediate area. Would you rate them excellent, good, fair, or poor?"	Hatry, et al., 1977
	"How do you think your household members rate the recreational facilities that they have used during the past month? The following characteristics were rated as "very good," "good," "fair," or "poor.": hours of operation, cleanliness, condition of equipment, helpfulness and attitude of personnel, amount of space, safety, and an overall rating.	Hatry, et al., 1977
	"How do you feel about the places right near your home for children under 12 to play out of doors - would you say they are excellent, good, average, or poor?" Respondent was then asked, "Why do you say so?"	Lansing, et al., 1970 Zehner, 1977
	Following a question about availability of public parks or schoolyards within walking distance of the respondent's home, he was asked if the children use the (park) space. If he answered affirmatively, "How satisfactory is this place for your children to play?" was asked, and why. Response categories were: "very satisfactory," "satisfactory," "unsatisfactory," or "very unsatisfactory." If it were not used, respondent was asked "Are there special reasons why your children don't use this space?"	Lansing and Hendricks, 1967
	Following a list of questions asking about people's participation in eight outdoor recreation activities, the question was asked, "All things considered, how satisfied are you with the recreational facilities available to you around here?" Using a show card, responses on a seven-point scale ranged from "completely satisfied" to "completely dissatisfied."	Rodgers, et al., 1975
	"From a teenagers point of view how satisfied would you expect them to be with the recreational facilities around here?" Using a show card, responses on a seven point scale ranged from "completely satisfied" to "completely dissatisfied."	Rodgers et al., 1975
	"All in all, how satisfied are you with the places around here where your young children play?" Using a show card, responses on a seven-point scale ranged from "completely satisfied" to "completely dissatisfied."	Rodgers et al., 1975
	"How satisfied are you with the entertainment that is available to people who live around here?" Using a show card responses on a seven-point scale ranged from "completely satisfied" to "completely dissatisfied."	Rodgers, et al., 1975

SERVICES/FACILITIES MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"From your point of view, how satisfactory are the places where (this child plays) (these children play) most often: would you say the places are very satisfactory, fairly satisfactory, not very satisfactory, or not at all satisfactory? "Why do you say that?"	Wilner, et al., 1962
	"Children who live in this neighborhood have plenty of good places to play." Response categories were: "agree strongly," "agree somewhat," "disagree somewhat," and "disagree strongly."	Zehner and Chapin, 1974, Child in the City, 1978
Recreation facilities - use	"Where do your children play outside?"	Becker, 1974
	"Are there any play areas here for very young children - say, where their mothers can take them to?" If respondent answer negatively, and the family has children under 5, the following question was asked: "If such a place were provided - say, with a sandbox and swings - would you use it?"	Cooper, 1975
	Following questions about availability of a park, heath or common where children can play, the respondent was asked, "Does he/she play there?" If the park was used, the respondent was asked, "Does he/she go there on his/her own or do you or other adults take him/her?" Respondent was then asked the name of park(s) used, if known.	Department of the Environment, 1972
	"In general, how often do you and your family use parks, playgrounds, or other recreational facilities in or near your neighborhood, outside your neighborhood but in this city or town, or outside this city or town?" Response categories for the three areas were: "several times a week," "once a week," "2 or 3 times a month," "once a month," "a few times a year" and "once a year or less."	Fried, 1973
	Following a question about the availability of parks and playgrounds, respondent was asked, "And when the weather is good, do(es) your child(ren) - those under 12 - play there every day, several times a week, once a week, once or twice a month, or less often?"	Zehner, 1977
	"When your child(ren) - those under 12 - play(s) outdoors where do(es) they/he/she usually play?" Response categories were: "your yard/apartment or townhouse grounds," "neighbors yard," "park or playground," "vacant lots," "woods or open space away from your yard/apartment grounds," and "somewhere else."	Zehner, 1977

SERVICES/FACILITIES MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
Streets/roads	<p>"Which statement best describes your opinion of the condition of the streets in your neighborhood?" "The streets are very smooth and free of holes or rough spots," "The streets are generally smooth with a few rough spots," "The streets are generally smooth and need some attention," or "The streets are very rough and need a great deal of attention."</p>	Academy for Contemporary problems, 1975
	<p>"How about the immediate neighborhood around your shoreline property - I'm thinking of the five or six homes or lots closest to your property - was the access road paved?" This question was followed by, "Was the road passable all year?"</p>	Burby, 1971
	<p>"How often was your street salted by city trucks last winter when it was covered with snow or ice?" Response categories were: "more than once a day," "once a day," "2 to 6 times per week," "once a week," "less than once a week," and "never."</p>	City of Cincinnati, 1978
	<p>"Is there a city maintained salt and sand container on a street near your home?"</p>	City of Cincinnati, 1978
	<p>Interviewer was asked to categorize the street in front of the dwelling unit, and record type of street. Categories were: "paved with curb (can be concrete or asphalt)," "paved without curb" and "unpaved (can be gravel with oil or tar or top)."</p>	Dallas City Profile Survey, 1978
	<p>Interviewer was asked to indicate if street in front of the respondent's dwelling is paved or not paved.</p>	Lansing and Hendricks, 1967
	<p>Interviewer was asked to indicate if street in front of the respondent's dwelling is straight or curved in this block.</p>	Lansing and Hendricks, 1967
	<p>Interviewer was asked to indicate if curb and gutter in front of respondent's house/apartment house exists or does not exist.</p>	Lansing and Hendricks, 1967, Zehner, 1977
Streets/roads - ratings	<p>Interviewer was asked to rate the condition of the street as "very good," "reasonable wear and tear," "minor defects," "major defects," "unpaved" and "under construction." Very good was defined as "smoothly paved, may have very minor cracks but no noticeable unevenness or roughness." Reasonable wear and tear was defined as "paved-shallow holes or pockmarks, narrow crack or network of small cracks, very little unevenness or roughness." Minor defects was defined as "paved-crack(s) causing consistently uneven surface, some pot holes, bumpiness." Major defects was defined as "paved-severe incidents of pot holes, buckling, or bumpiness causing a very uneven or unsafe ride." Unpaved was defined as a street with only a gravel base.</p>	Abt Associates, 1974

SERVICES/FACILITIES MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"Do you think the condition of the streets in your neighborhood is better, about the same, or worse than in other parts of Columbus?"	Academy for Contemporary Problems, 1975
	"I'm going to read you what the city does. For each one please tell me how good a job the city does on this street." Items included: cleaning the street, having the street cleaners come often enough, maintaining the surface of the street in good condition, and taking care of the plantings on the street. Response categories were: "excellent job," "very good job," "not very good job," and "poor job."	Appleyard, 1976
	"Compared to other neighborhoods, would you say that the maintenance of the streets and roads around here - that is, repairs, cleaning (snow removal if applicable) - is superior, above average, average or below average?"	Bradburn, et al., 1970
	"How would you describe the markings for crosswalks and center lines in your neighborhood? Would you say they are in very good condition, good condition, poor condition, or very poor condition?"	City of Cincinnati, 1978
	"Thinking about your experiences last winter, how good a job do you think the Street Maintenance Department did on snow removal and ice control in your neighborhood?" Response categories were: "very good," "good," "poor," and "very poor."	City of Cincinnati, 1978
	"Other than snow and ice removal, how satisfied are you with the job the city does in cleaning your street?" Response categories were: "very satisfied," "satisfied," "dissatisfied," "very dissatisfied," and "city never cleans."	City of Cincinnati, 1978
	"Is the condition of the road surface of the streets in this neighborhood a very serious problem, a somewhat serious problem, -only a small problem, or not a problem at all?" If respondent said condition is a problem, he was asked, "What kind of problem is it - a paved street that needs patching, a paved street that needs resurfacing, a dirt or gravel street that needs patching or grading, or a dirt or gravel street that needs paving?"	Dallas City Profile Survey, 1978
	"How would you rate the condition of street and road surfaces in your neighborhood? Are they in good condition all over, mostly good but a few bad spots here and there, or are there many bad spots?"	Hatry, et al., 1977

SERVICES/FACILITIES MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	<p>"I'd like to ask you how satisfied you are with some of the main public services you receive. Please tell me how you feel about each thing I mention using one of the answers on this card. First, how about the way the streets and roads are kept up around here. Would you say this service is very good, fairly good, neither good nor bad, not very good, or not good at all?"</p>	<p>Michelson, 1977, Marans and Wellman, 1978</p>
	<p>"What is the condition of the road pavement?" Response categories were: "very good," "good," "average," "poor," and "very poor."</p>	<p>Troy, 1971</p>
	<p>Interviewer was asked to indicate if the street serving respondent's house/apartment house was in a good state of repair, or required some maintenance-bumps, holes, serious cracks, etc.</p>	<p>Zehner, 1977</p>
Sidewalks/footpaths	<p>"Would you say there are enough sidewalks in this neighborhood?" Response categories were: "yes (enough)," "no (too few)," and "none exist and none needed."</p>	<p>Hatry et al., 1977</p>
	<p>Interviewer was asked to indicate if there was a sidewalk along the street in front of this home. Categories were: "sidewalk exists along the street," "no sidewalk," and "hard to tell (explain)."</p>	<p>Lansing, et al., 1970</p>
	<p>Town planning students were asked, "Are there footpaths?" Categories were: "none," "one side," and "both sides".</p>	<p>Troy, 1971</p>
	<p>Interviewer was asked to indicate if there was a sidewalk or pathway in front of, beside, or behind respondent's house/ apartment house.</p>	<p>Zehner, 1977</p>
Sidewalks/footpaths - ratings	<p>Interviewers were asked to rate the condition of the paved public sidewalks (not including dirt or gravel paths) as "very good," "reasonable wear and tear," "minor defects," and "major defects". Very good was defined as "smooth, level surface: No unevenness." Reasonable wear and tear was defined as "mostly smooth surface. Only a few small, narrow cracks, and/or small, shallow holes. Only slight unevenness." Minor defects was defined as "some surface deterioration and unevenness caused by settling, buckling, raising, cracks, holes, broken or missing areas." Major defects was defined as "considerable surface deterioration and unevenness caused by settling, buckling, raising, cracks, holes, broken or missing areas."</p>	<p>Abt Associates, Inc. 1974</p>
	<p>Interviewer was asked to note the condition of the sidewalk in front of the dwelling unit. Categories were: "good condition," "needs minor repair," "needs major repair," and "no sidewalk."</p>	<p>Dallas City Profile Survey, 1978</p>

SERVICES/FACILITIES MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"Are the sidewalks in this neighborhood generally in good condition?" Response categories were: "yes," "no," or "no sidewalks in this neighborhood."	Hatry, et al., 1977
	"How important to you is it to have sidewalks or footpaths going by your home - is it very important, fairly important, or not important at all?" Respondent was then asked, "Why do you say so?"	Lansing, et al., 1970
Street lighting - ratings	"Do you feel that the street lights on your block provide too much light, enough light, or not enough light?"	Academy for Contemporary Problems, 1975
	"In general, do you think that other parts of Columbus have better, about the same, or worse street lighting than your own neighborhood?"	Academy for Contemporary Problems, 1975
	"In general, do you think the street lighting in your own neighborhood is better, about the same, or worse than in other parts of Columbus?"	Academy for Contemporary Problems, 1975
	Respondent was given a list of neighborhood services and characteristics including outdoor lighting. Response categories were: "excellent," "satisfactory," "needs minor improvement," or "needs major improvement." Depending on the response, one of two open-ended questions was asked: "What improvement is needed?" or "What is especially good about it?"	Becker, 1974
	"How satisfied are you with the lighting on your street?" Response categories were: "very satisfied," "satisfied," "dissatisfied" and "very dissatisfied."	City of Cincinnati, 1978
	"Would you say the amount of street lighting at night in this neighborhood is about right, too low (need more lighting), too bright (more lighting than necessary), or no lighting is needed?"	Hatry, et al., 1977
Sewers	"How would you rate the storm sewer system in your neighborhood? Would you say that the sewers usually handle all the water when it rains, that there is some backup, or that there is a great deal of backup in the streets when it rains?"	Academy for Contemporary Problems, 1975
	"About how often over the past 12 months have you been seriously inconvenienced by standing water in the streets of your neighborhood after a rain storm? Would you say after almost every rain, only after every heavy rain, only after some heavy rain, or never?"	Hatry, et al., 1977

SERVICES/FACILITIES MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
Refuse	"How good is garbage collection in this neighborhood? Is it very good, fairly good, neither good nor bad, not very good, or not good at all?"	Campbell, et al., 1976 Michaelsen, et al., 1976
	Is there a problem with garbage collectors spilling or scattering trash or garbage you left out for them? If respondent answered affirmatively, he was asked "Is it a very serious problem, a somewhat serious problem, only a small problem, or not a problem at all?"	Dallas City Profile Survey, 1978
	"Do you find that the facilities for getting rid of refuse are satisfactory, all right, or unsatisfactory?" If respondent answered "unsatisfactory," he was asked what the trouble is.	Department of the Environment, 1972
Water/Utilities	"Were the lots in your neighborhood served by a community water system or did each individual have his own well?"	Burby, 1971
	Interviewer was asked to indicate if utilities in respondent's immediate neighborhood are underground, overhead behind homes (on back lot line, etc.), or overhead along street."	Zehner, 1977
Commercial (see also LOCATIONAL MEASURES)	"Do you feel that your neighborhood business district is improving, declining or staying about the same?"	City of Cincinnati, 1978
	"On the average, how often do you shop for items such as hardware, clothes, or appliances in or near your neighborhood, outside your neighborhood but in this city or town, and outside this city or town?" Response categories for each of the three locations: "several times a week," "once a week," "2 or 3 times a month," "once a month," "a few times a year," "once a year or less" and "never."	Fried, 1973
	"Where is most of the grocery shopping done for your family these days?" Respondent was asked the name of store or shopping center, it's location (e.g., street intersection), and the town.	Lansing, et al., 1970
	"How satisfied are you with this (grocery) store - would you say you are completely satisfied, very satisfied, moderately satisfied, slightly satisfied, or not at all satisfied?"	NORC, 1974
	"Do you think the quality of the food available in supermarkets around here is better than, worse than, or about the same as it is in most other parts of the three-county area?"	Rodgers, et al., 1975

SERVICES/FACILITIES MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"What about the price of food available in supermarkets around here. Do you think the food prices are higher, lower, or about the same in most other parts of the three-county area?"	Rodgers, et al., 1975
Global services/ facilities - ratings	"Now I'm going to ask you about some facilities and services that are available in some neighborhoods. Please tell me for each one whether you think it is good, fair or poor in your neighborhood or if it is not available at all." Items included: parking for people who live in the neighborhood, street lighting, convenience to grocery shopping, garbage collection, the speed with which the fire department comes to the neighborhood when called, police protection, public transportation in the area, trees and grass and flowers, places of worship, medical care clinics, hospitals or doctors' offices in this neighborhood, recreation facilities for adults, recreation facilities for teenagers in the area, play areas for children under 12, day care facilities, elementary schools, junior high schools, senior high schools.	Abt Associates, 1974
	"Which one of the following improvements is needed most in this neighborhood?" Improvements were: "new or improved park facilities," "resurfacing streets," "more street lights," and "better storm sewer system." Respondent was also asked to indicate the second most needed improvement.	Academy for Contemporary Problems, 1975
	"Which of the following improvements is needed most in this neighborhood?" Items included: new and/or improved park facilities, resurfacing of streets, more street lights, and better storm-sewer system.	Academy for Contemporary Problems, 1975
	"How do you feel about the services you get in this neighborhood - like garbage collection, street maintenance, fire and police protection?" Response categories were: "delighted," "pleased," "mostly satisfied," "mixed (about equally satisfied and dissatisfied)," "mostly dissatisfied," "unhappy," and "terrible."	Andrews and Withey, 1976
	"Compared to other neighborhoods, would you say that the public services around here - for example, street repairs and cleaning, garbage collection, and fire protection - are superior, above average, average, or below average?"	Bradburn, et al., 1970
	"Assuming land was available, are there any particular community services you would favor having located in this neighborhood?" If respondent answered affirmatively, he was asked "What types?"	Dear and Taylor, 1979
	"Are there any particular community services you would oppose having located in this neighborhood?" If respondent answered affirmatively, he was asked "What types?"	Dear and Taylor, 1979

SERVICES/FACILITIES MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"Compared with other parts of this (city/town), are the services in this neighborhood better, worse, or about the same?"	Fried, 1973
	Using a list of public services including police protection, garbage collection, street lighting, fire protection, public schools, parks and playgrounds, road and street maintenance, public transportation, and public health services in hospitals and clinics, the respondent was asked, "Which one of these services would you most like to see improved or made available in the next few years?" and "What is the next service you would most like to see improved or made available in the next few years?"	HUD, 1978
	"Here is a card listing some public services provided to neighborhoods. For each one I'd like you to rate it in this neighborhood as excellent, pretty good, only fair, or poor or is it not available as a public service?" Items included: police protection, garbage collection, street lighting, fire protection, public schools, parks and playgrounds, road and street maintenance, public transportation, public health service, and hospitals and clinics. Following rating of each service, respondent was asked: "Which one of these services would you most like to see improved or made available in the next few years?" and "What is the next service you would most like to see improved or made available in the next few years?"	HUD, 1978
	"Overall, how good are the public services provided by your community?" Response categories were: "very good," "fairly good," "neither good nor bad," "not very good," and "not good at all."	Michaelsen, et al., 1976
	"Thinking in terms of all public services - fire and police protection, parks, transportation, street maintenance and other things - do you think the services here in your neighborhood are generally better than in other parts of the city, are they the same, or are they not as good as other parts of the city?"	O'Dell, 1973
	"Now I'd like to show you a list of facilities and services that are available in most communities. When you think of (name of town) how would you rate the local schools? Would you say they are very good, better than average, average, or poor?" Other items included on the list were: local schools, parks and playgrounds, shopping facilities, child care centers, activities and programs for teenagers, activities and programs for senior citizens, bus service, garbage collection, street cleaning, sewer and storm drainage, fire protection, and police protection.	Zehner and Chapin, 1974

SERVICES/FACILITIES MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	<p>"We have asked you a number of questions about the facilities and services you used in the last year or so. Now here is a list of some of the same facilities as well as some new ones we've added whether or not you have them now. If you had your choice, which three of these facilities would you prefer to have in your neighborhood, that is, within one-half mile of your home?" Facilities were: bar or tavern; billiard parlor or bowling alley; bus stop; convenience grocery store; day care center; drug store; gasoline service station; indoor movie theater; laundromat; library; nursery school; outdoor swimming, picnic area; playgrounds with swings and slides; post office sub-station; private medical clinic; public health clinic; quiet place to walk and sit outdoors; roller skating rinks; supermarkets; teenage recreation center; and tennis courts.</p>	Zehner, 1977

SOCIOCULTURAL MEASURES

CONCEPT	DESCRIPTION	SOURCE
Ratings of neighbors - general	Respondent was asked to describe seven attributes of the people living on his street. A seven-point semantic differential scale was used to record responses to each of the following: friendly-unfriendly, helpful-not helpful, interesting-dull, snobbish-not snobbish, happy-unhappy, gossipy-mind their own business, lonely-not lonely.	Appleyard, 1976
	"What about the people who live around here. As neighbors, would you say they are very good, fairly good, neither good nor bad, not very good, or not good at all?"	Campbell, et al., 1976, Michaelsen, et al., 1976
	"How about the people who live around here - as neighbors would you say they are very good, fairly good or not very good?"	Lawton, 1980
	"In general, how well do you like the people who live around here: would you say you like them a lot, quite a bit, only a little or not at all?"	Wilner, et al., 1962
	"In general, how would you describe the people who live around here?" Eight paired adjectives were presented to the respondent: loud and noisy-quiet, unfriendly-friendly, don't help one another out-do help one another out, tend to stick their nose in other people's business-mind their own business, do quite a bit of drinking-don't do much drinking, have badly behaved children-have well behaved children, quarrel a lot-don't quarrel much, clean-dirty.	Wilner, et al., 1962
Friendliness of neighbors	"In general, how friendly do you find most of the people in this neighborhood. Would you say they are friendly, neither friendly nor unfriendly, or are they unfriendly?"	Abt Associates, 1974
	"Would you say this is a very friendly place to live, somewhat friendly place to live, or not a very friendly place to live?" Respondent was then asked why he said that.	Becker, 1974
	"Here is a scale running from zero to nine. If "9" stands for someone who is very sociable and "0" refers to someone who is not at all sociable, where would you guess the average person in this neighborhood belongs?"	Bradburn, et al., 1970
	"What about the political position of the average person in this neighborhood? If "9" stands for someone very liberal and "0" stands for someone very conservative, where would you guess the average person in this neighborhood belongs?"	Bradburn, et al., 1970
	"Do you get on well with your neighbors?"	Cooper, 1975
	"Would you say Easter Hill is a friendly place to live?"	Cooper, 1975

SOCIOCULTURAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"In general, would you say that people in your neighborhood could keep pretty much to themselves or do they get together quite a bit?"	HUD, 1978
	"How satisfied are you with the friendliness of the neighbors?" Respondent was handed a showcard with a seven-point scale. Response categories ranged from "completely satisfied" to "completely dissatisfied."	Marans and Wellman, 1978
	"On the whole, would you say that most people who live around here are very friendly, friendly, unfriendly, or very unfriendly?"	Michelson, 1977
	"Is it easier to make friends in other places you've lived?" Response categories were: "yes," "no," or "about the same."	Norcross, 1973
	"How would you say the people around here act toward each other?" Response categories were: "extremely friendly", "just somewhat friendly", and "indifferent and unfriendly".	Sanoff, 1973
Disharmony among neighbors	"Finally a few questions on how people get along together. Are you aware of any tensions between the Negroes and Whites living in this neighborhood?" If respondent answered affirmatively, he was asked if they were serious problems or just minor.	Bradburn, et al., 1970
	"Do you have any particular problems with children in your neighborhood?" If respondent answered affirmatively, he was asked, "What are the problems?"	Michaelsen, et al., 1976
Neighbor contact	"A lot of people in my neighborhood are strangers to one another." Response categories were: "completely false," "somewhat false," "both true and false," "somewhat true," and "completely true."	Andrews and Withey, 1976
	"Would you say that in this neighborhood whites and Negroes socialize with each other a great deal, a little, or not at all?"	Bradburn, et al., 1970

SOCIOCULTURAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	<p>"Which of these things has anyone in your family done in the past few months with members of families who live in this neighborhood?" The items included: stopped and talked when we met; attended the meeting of a neighborhood organization or group together; had an informal chat together in their home or our home; had dinner or a party together at their home or our home; went out together for dinner or a movie; and we got together on other occasions. If respondents had children under 18, the following items were also asked: their children played outdoors with our children; their children played indoors with our children; and their children got together with our children in some neighborhood groups.</p>	Bradburn, et al., 1970
	<p>"How often do you visit with any of your neighbors either in your home or in theirs - every day, at least once a week, 1-3 times a month or less than once a month?"</p>	Butler, et al., 1969
	<p>"About how often do you visit with your neighbors in their home or yours?" Response categories were: "daily," "at least once a week," "1-3 times a month," "less than once a month," "less than once a year," and "never"</p>	Chapin, 1972, Zehner and Chapin, 1974
	<p>"I know alot of people in my neighborhood." Response categories were: "agree strongly", "agree somewhat", "neither agree nor disagree", "disagree somewhat", and "disagree strongly"</p>	Child in the City, 1978
	<p>"How many families in Easter Hill do you know well enough to visit with quite often in their homes?" Response categories were: "1-2," "3-9," and "10+."</p>	Cooper, 1975
	<p>"Where do the three families live whom you visit most often?" Response categories were: "next door (either side)", "two doors down (either side)", "farther along row," "across backyard", "across street or court", and "farther away."</p>	Cooper, 1975
	<p>"Have you got to know any people to speak to on this estate since you came to live here?" If respondent answered affirmatively, he was asked, "About how many?" Response categories were: "1-2," "3-9," and "10+."</p>	Department of the Environment, 1972
	<p>"How often do you do things together or go out?" Response categories were: "often," "sometimes", "rarely," and "never."</p>	Fried, 1973
	<p>"How often do you and your neighbors have friendly talks together?" Response categories were: "often," "sometimes", "rarely" and "never."</p>	Fried, 1973

SOCIOCULTURAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"How often do you talk to any of the half dozen families who live closest to you just to chat or for a social visit - would it be every day, several times a week, once a week, 2-3 times a month, once a month, a few times a year, or never?"	Lansing, et al., 1970
	"Some people feel that they don't see enough of their neighbors; some people feel that they see their neighbors about often enough; and others feel that they see their neighbors too much. How about you?"	Lansing and Hendricks, 1967
	"How many persons in this part of town have you visited in their or your home?"	Michelson, 1977
	"With which of the groups would you say you have the most personal or intimate contact?" Response categories were: your parents, children or in-laws who live in the same neighborhood as you but not at the same house; other relatives who live in the same neighborhood as you; your parents; children or in-laws living elsewhere; other relatives living elsewhere; non-related neighbors, friends who are neither relatives nor neighbors; and former neighbors.	Michelson, 1977
	Respondent was asked to tell the interviewer which answer comes closest to how often he spends a social evening with someone who lives in his neighborhood. Response categories were: "almost every day," "once or twice a week," "several times a week," "about once a month," "several times a year," and "never."	NORC, 1978
	Following a question about the number of good friends in the three-county area, the respondent was asked "How many of these friends live within a mile of here?"	Rodgers, et al., 1975
	"Now let's talk about all your neighbors on this block or in this general area. How often do you get together at your home or others?" Respondent was handed a card with the following responses: "almost every day," "once or twice a week," "once or twice a month," "a few times a year or less," and "never."	Warren, 1977
	"During the year, do people in this neighborhood get together many times, a few times, or hardly ever?"	Warren, 1977
	"How often do neighbors drop in when you'd rather they would not: Would you say - very often, fairly often, hardly ever, or never?" If respondent answered "very often," "fairly often," or "hardly ever," he was asked, "How much does their dropping in bother you: would you say - alot, a little, or not at all?"	Wilner, et al., 1962

SOCIOCULTURAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"In general, where do most of the people live whom you visit for an evening or who visit you: do they live - in this building, somewhere else in this block, not in this block but within four to five blocks of here, or farther away than that?"	Wilner, et al., 1962
	"Now I'd like to ask you about the person or family you get along with best right here in the neighborhood other than a relative or your best friend." Respondent was asked to determine if they have done each of the following activities with this neighbor in the past year or so: gotten together for family meals; gotten together because of an emergency; dropped in for a visit at your home or theirs; or shopped together.	Zehner and Chapin, 1974
	"Most people around here would like to spend more time with their neighbors". Response categories were: "agree strongly", "agree somewhat", "disagree somewhat", and "disagree strongly."	Zehner and Chapin, 1974, Zehner, 1977
Neighbor support	"I could count on my neighbors to help out if something were to happen to my family." Response categories were: "completely false," "somewhat false," "both true and false," "somewhat true" and "completely true."	Andrews and Withey, 1976
	Someone from the neighborhood keeps an eye on our house or apartment, even when no one is there." Response categories were: "completely false," "somewhat false," "both true and false," "somewhat true" and "completely true."	Andrews and Withey, 1976
	"Someone keeps an eye on the children in my neighborhood when they play, even if not their parents." Response categories were: "completely false," "somewhat false," "both true and false," "somewhat true" and "completely true."	Andrews and Withey, 1976
	"Do you have an arrangement worked out with your neighbors to help in case of danger or an emergency?" If respondent answered affirmatively, he was asked what the arrangement is.	Becker, 1974
	Respondent was asked about how often he and his neighbors did such activities as "lend each other things and do favors for each other," or "ask each other for advice on problems." Response categories were: "daily", "at least once a week", "1-3 times a month", "less than once a month", "less than once a year", and "never."	Chapin, 1972
	"In the past month, have you loaned money or given your time without pay to help someone in the neighborhood?"	Chapin, 1972

SOCIOCULTURAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"In the past month, has anyone in the neighborhood loaned you any money or given his time to help you out with something?"	Chapin, 1972
	"Do you ever feel cut off from people in this estate?"	Department of the Environment, 1972
	Female respondent was asked, "How often do you and your neighbors help each other with meals and housework?" Response categories were: "often", "sometimes", "rarely", and "never".	Fried, 1973
	Female respondent was asked, "How often do you and your neighbors help out when someone is sick?" Response categories were: "often," "sometimes," "rarely," and "never."	Fried, 1973
	Respondent was asked if he felt he could call on a neighbor, if necessary or desirable for each of the following: "a small amount of cash when the banks are closed," "borrowing a food staple as needed or a tool when all the stores are closed", "shooting the breeze", and "taking care of your children."	Michelson, 1977
	"Do you and your neighbor's families exchange things such as books, magazines, patterns, recipes, jellies, tools, dishes, seeds or other similar things?" Response categories were: "often", "sometimes", "rarely", and "never".	Sanoff, 1973
	"Are there people in the local area that a person can rely on if they need house or car repairs or things like that - special work for pay when you want to save money?"	Warren, 1977
	"It is harder to call on my neighbors in time of need in this community than where I used to live." Response categories were: "agree strongly," "agree somewhat," "disagree somewhat," and "disagree strongly."	Zehner, 1977
Neighbor recognition	"Apart from the people in your apartment, how many people in the development would you say you know by sight and at least well enough to say hello to?" Response categories were: "1-3", "4-8", "9-15" and "20+". Respondent was then asked, "Where in the development do most of these people live?" Response categories were: "same floor," "same building," "adjacent building," "next door," and "whole development".	Becker, 1974
	"About how many people do you know here, just to say hello to? Where do you see them most often?" Response categories were: "when you are in backyard," "when you are in front yard," "walking through neighborhood," and "at shops."	Cooper, 1975

SOCIOCULTURAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"Now let's talk about neighbors. Of those neighbors that you know well enough to say hello to, how many live: in the same, the opposite, or adjacent buildings; within two blocks, not counting any you've mentioned already; or elsewhere in the neighborhood?"	Fried, 1973
	"How many families do you know by name in this neighborhood?". Respondent was then asked, "How many of these families homes have you been in during the past month?"	Kain and Quigley, 1969
	"Now I'd like to ask you just about your close neighbors - I mean the half dozen families living nearest to you. How many of the adults in these families would you know by name if you met them on the street - all of them, nearly all, half of them, just a few of them, or none of them?"	Lansing, et al., 1970, Burby, 1971
	"We realize that it is difficult to become very friendly with people in the short time since you have moved. However, how many individuals in this part of town do you now recognize and say hello to?"	Michelson, 1977
	"About how many neighboring families or people not included in these families do you know in this neighborhood well enough to do more than just say good morning to?"	Michelson, 1977
	"Do you know your half-dozen nearest neighbors by name?"	Norcross, 1973
	"How many of your neighbors do you know to speak to? Would you say most of them, about half of them, a few of them, or none of them?"	Quality of Life Project, 1977
	"How many women around here do you know well enough to say hello to?" Response categories were: "none," "1 to 4," "5 to 9," "10 to 14," "15 to 19," and "More than 19."	Wilner, et al., 1962
Friends/relatives in neighborhood (see also LOCATIONAL MEASURES)	"How many of your relatives now live in this neighborhood, would you say none, some or many?"	Abt Associates, 1974
	Apart from people in your apartment, how many people in the development would you say are your good friends - you know their first and last names and visit at least once a week?" Response categories were: "1-3," "4-8," and "10+."	Becker, 1974
	"Where in the development do your 3 best friends live?" For each friend, response categories were: "same floor," "same building," "adjacent building," "next door," and "whole development."	Becker, 1974

SOCIOCULTURAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	<p>"Do your parents live in this neighborhood, in another neighborhood in this metropolitan area/county, or do they live somewhere else?" "How about your or your husband's/ wife's parents?" "How about your brothers and sisters?" "Your husband's/wife's brothers and sisters?" Respondent was then asked, "Do you have any (other) relatives living in this neighborhood?"</p>	Bradburn, et al., 1970
	<p>"Do any of your relatives live in this neighborhood?"</p>	Butler, et al., 1969
	<p>"Besides the people living in this house, how many other households of relatives do you have living in this neighborhood or elsewhere in the Washington area?" Response categories were: "none," "one," "two," "three," "four," "five," or "six or more."</p>	Chapin, 1972, Zehner and Chapin, 1974
	<p>Following questions about relatives visited most often and the frequency of visits, the respondent was asked, "Is that household in this neighborhood, somewhere else in the district, or in the Washington suburbs?"</p>	Chapin, 1972
	<p>"How many of your friends live in your neighborhood? Response categories were: "all," "most," "about half," "less than half," "a few," "none," and "I don't have any friends."</p>	Child in the City, 1978
	<p>"Do you have any relatives (other than those living with you) in the neighborhood?" If respondent answered affirmatively, he was asked, "How many times does your family do things with these relatives?" Response categories were: "never," "a few times a year," "once a month," "a few times a month," "once a week," and "everyday."</p>	Kain and Quigley, 1969
	<p>Respondent was asked to indicate where the person that he knows best lives, second best and third best, given the constraint "inside the neighborhood." Respondent was then asked, "Is this person related to you?" and "Where do you usually see this person face to face?"</p>	Michelson, 1977
	<p>"Do most of your friends live in this (neighborhood/ community) or do most of your friends live further away?"</p>	NORC, 1963, Bradburn, et al., 1970
	<p>"Do any of your relatives live within a mile of here?" and "Would you like to have more relatives living in this area, fewer relatives or wouldn't it matter?"</p>	Rodgers, et al., 1975
	<p>Do you have any relatives (yours or your wife's/husband's) who live in this neighborhood?"</p>	Warren, 1979

SOCIOCULTURAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
Neighborhood mix - race/ethnicity	"What are the ethnic nationalities or racial groups in this neighborhood?" Respondent was asked to estimate the proportion of each group. If respondent mentioned Negroes, but one percent or less, he was asked "How many Negro families would you say that would be?"	Bradburn, et al., 1970
	"Is this neighborhood all white, mostly white, about half and half, mostly black, all black or what?"	Campbell, et al., 1976
	"There are too many people from other countries in this neighborhood." Response categories were: "agree strongly," "agree somewhat," "neither agree nor disagree," "disagree somewhat," and "disagree strongly."	Child in the City, 1978
	"There are people of many nationalities in my neighborhood." Response categories were: "agree strongly," "agree somewhat," "neither agree nor disagree," "disagree somewhat," and "disagree strongly."	Child in the City, 1978
	"I see that there are people of different races living at Easter Hill - does that bother you?" If respondent answered affirmatively he was asked, "Why is that?"	Cooper, 1975
	White respondent was asked, "How many people in this neighborhood would you say share your ethnic background?" The following response categories were read: "nearly everyone," "most people," "some people," and "few or none." Black respondent was asked, "How many people in this neighborhood would you say are black?" The same response categories were read.	Fried, 1973
	"How would you describe the racial composition of your immediate neighborhood? Would you say it is all white, mostly white, about half white and half minority, or all minority?"	HUD, 1978
	"Are there any (Negroes/Blacks) living in this neighborhood now?" If respondent answered "yes," he was asked the following questions: "Are there any (Negro/Black) families living close to you?" "How many (blocks/miles) away do they [(the Negro/Black) families who live closest to you] live?" Response categories were: "on this block, a few doors/houses away," "1-3 blocks away, under 1/4 mile," "4-8 blocks away, 1/4 to one mile away," and "over 8 blocks away, over 1 mile." "Do you think this neighborhood will become all (Negro/ Black) in the next few years, or will it remain integrated?" Response categories were: "all Negro/Black," "remain integrated," and "mixed, but not Black and White."	NORC, 1978
	"Are the people living in this neighborhood mostly white or mostly black?" Response categories were: "mostly white," "mostly black," and "evenly mixed (if volunteered)."	NORC, 1974

SOCIOCULTURAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"Do both white and Black students attend the public schools in this neighborhood?"	NORC, 1974
	"How would you feel about living in a neighborhood where most of the people (were, are) white - would you like it very much, like it somewhat, dislike it somewhat, or dislike it very much?"	NORC, 1974
	"If a Negro with the same income and education as you have moved into your block, would it make any difference to You?" Response categories were: "yes, would like it," "yes, would not like it" and "no difference."	NORC, 1978
	"If a black family moved into this neighborhood, do you think that that would upset all, most, a few, or none of the families already living there?" Respondent was then asked, "Which of the reasons on this card comes closest to how you would feel about it? Would you: wish they hadn't moved in and try to encourage them to leave, wish they hadn't moved in and try to be nice to them anyway, not think about their race very much one way or the other, or go out of your way to make sure they were made to feel a part of the neighborhood?"	Zehner, 1977
Neighborhood mix - income	"Would you say that most people in the neighborhood have about the same income, that there are differences of a few thousand per year between top and bottom, or that there are very large differences in income?"	Bradburn, et al., 1970
	"Are most of the people in this neighborhood financially better off, worse off, or about the same as you?"	Butler, et al., 1969
	"Most families in my neighborhood have about the same income." Response categories were: "agree strongly," "agree somewhat," "neither agree nor disagree," "disagree somewhat," and "disagree strongly."	Child in the City, 1978
	"And how about the other people living at Easter Hill - which word do you think describes them best?" Response categories were: "lower-class," "working-class," "lower-middle-class," "middle-class," and "upper-class."	Cooper, 1975
	"In terms of income level, would you say people in this neighborhood tend to be: much better off than you are, a little better off than you are, a little worse off than you are, much worse off than you are, or about the same?"	Fried, 1973

SOCIOCULTURAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	<p>Following a question asking the respondent to compare his/her own economic level with that of most of the neighbors, "On the whole what would you consider their economic level to be?" was asked. The answer was recorded verbatim, and the following probe was used if necessary: "Would you say that they are: working class, lower middle class, middle class, upper middle class, or upper class?"</p>	Michelson, 1977
	<p>"As far as you're concerned, do you think it is a good idea for neighborhoods to have people on welfare together with people not on welfare, or doesn't it matter?" Response categories were: "good if mixed welfare and non welfare", "doesn't matter" and "good if not mixed."</p>	Sanoff, 1973
Neighborhood mix - education	<p>"About what proportion of people in this neighborhood have the same educational background as you?" Response categories were: "most," "some," "few" and "none."</p>	Michelson, 1977
	<p>"On the whole, what would you consider their educational level to be?" Answers were recorded verbatim, unless a probe was necessary: "Would you say that they have: grade school, some high school, high school, vocational training, some university, university, or more than university?"</p>	Michelson, 1977
	<p>"Would you say that the educational level of most of your neighbors is higher or lower than your own?"</p>	Michelson, 1977
Neighborhood mix - age	<p>"Are most of the people in this neighborhood the same age, older, or younger than you?"</p>	Butler, et al., 1969
	<p>"Many families in my neighborhood have small kids." Response categories were: "agree strongly," "agree somewhat," "neither agree nor disagree," "disagree somewhat," and "disagree strongly."</p>	Child in the City, 1978
	<p>"My neighborhood would be better if it had more small children." Response categories were "agree strongly," "agree somewhat," "neither agree nor disagree," "disagree somewhat," and "disagree strongly."</p>	Child in the City, 1978
	<p>"There are many old people in my neighborhood." Response categories were: "agree strongly," "agree somewhat," "neither agree nor disagree," "disagree somewhat," and "disagree strongly."</p>	Child in the City, 1978
	<p>"My neighborhood needs more kids my age." Response categories were: "agree strongly," "agree somewhat," "neither agree nor disagree," "Disagree somewhat," and "Disagree strongly."</p>	Child in the City, 1978

SOCIOCULTURAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"There are too many old people in this neighborhood." Response categories were: "agree strongly," "agree somewhat," "neither agree nor disagree," "disagree somewhat," and "disagree strongly."	Child in the City, 1978
	"Thinking about the 10 or 15 families living nearest to you, are most of the adults about your age, younger than you, or older?"	Rodgers et al., 1975
Neighborhood mix - political affiliation	"Would you say that people in this neighborhood usually vote Democratic, usually vote Republican, or does it change from election to election?"	Bradburn, et al., 1970
	"What about the political position of the average person in this neighborhood? If "9" stands for someone very liberal and "0" stands for someone very conservative, where would you guess the average person in this neighborhood belongs?"	Bradburn, et al., 1970
	"Would you say that most of the people in this neighborhood vote the same way you do or differently?"	Butler, et al., 1969
Neighborhood mix - general	"How many of your neighbors have the same general background as yourself. Would you say none, some or many?"	Abt Associates, 1974
	"What would you estimate the proportion of Protestants, Catholics, and Jews to be in this neighborhood?"	Bradburn, et al., 1970
	"There are different kinds of neighborhoods. In some, people are all pretty much the same. In others, they are different. What would you say about this neighborhood - are people pretty much the same or different?"	Bradburn, et al., 1970
	"How about the immediate neighborhood around your shoreline property. Were the people who own land and/or houses near here of the same social class as you or somewhat higher social class or somewhat lower class?"	Burby, 1971
	"Do most of the people in this neighborhood enjoy doing the same things you do or do they enjoy doing different things?"	Butler, et al., 1969
	"Do you feel that most of the members in this neighborhood feel the same way you do about how children should be brought up or do you think they feel differently?"	Butler, et al., 1969

SOCIOCULTURAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	Respondent was asked, "Where would you prefer to live - a neighborhood in which most people are the same as you, one in which most people are different from you, or one in which some people are the same as you and some are different from you?" The question was asked in reference to the following items: leisure-time interests; level of education; income; age; race; religion; ethnic background or nationality; and attitudes on political issues.	HUD, 1978
	"About what proportion of people in this neighborhood (area) have the same interests as you?" Response categories were: "most," "some," "few," or "none." If respondent said "most," he was asked, "What are these interests?" If he said "some," "few," or "none.", "How do they differ from you?" was asked.	Michelson, 1977
	"On the whole, would you say that the people living in this (neighborhood/community) are pretty much the same sort of persons you are, or are they different from you in important ways?" If respondents said they are different, "In what ways are they different?" was asked.	NORC, 1963
	"Do people in this neighborhood have many things in common, some things in common, or a few things in common?"	Warren, 1977
Community organizations	"Aside from the churches and church groups what are the other important neighborhood organizations around here?" For those organizations mentioned, respondent was asked whether he knew the name of the president, how many members the organization had, the type of group it was, the type of community issues the group concerned itself with and whether the group has both white and black members.	Bradburn, et al., 1970
	"Is there a neighborhood association or community council (or its equivalent) in your neighborhood?"	City of Cincinnati, 1978
	Following a question about problems in the neighborhood, the respondent was asked, "Is there a neighborhood group to work on such problems?" If respondent answered affirmatively, he was asked if the group was getting anything done and if the respondent is a member.	Kain and Quigley, 1969
Organizational affiliation	"What neighborhood organizations do you and your family belong to?" For neighborhood organizations mentioned the respondent was asked, "What proportion of the meetings do you or your family attend - almost all, about half, very few, or none?" and "Have you been dissatisfied in any way with this group in the past year?"	Bradburn, et al., 1970
	"Do you belong in some way to your community council?"	City of Cincinnati, 1978

SOCIOCULTURAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"Do you or any other members of the family belong to any clubs or churches in this area?" The organization and appropriate location were recorded for each family member.	Cooper, 1975
	Respondent was presented with a list of organizations, including parent-teacher associations and neighborhood organizations and asked to look over the list and tell which of these kinds of organizations he belonged to and was active in.	Lansing, et al., 1970, Lansing and Hendricks, 1967
	"Are you (or your husband-wife) active in school affairs at your (child's/children's) school(s)?"	Rodgers, et al., 1975
	Respondent was asked "Do you belong to or take part in any clubs or groups such as social, religious, civic or other groups?" Respondent who mentioned organizations was then asked whether the organizations met within the neighborhood.	Wilner, et al., 1962
Citizen involvement/ concern	"If you had a choice, would you rather participate in decisions about the future development of your own neighborhood or Columbus as a whole?"	Academy for Contemporary Problems, 1975
	"Would you say that in general people in this neighborhood are very active, moderately active, or not too active in community affairs?"	Bradburn, et al., 1970
	"Would you say that in general, the same people are active in many organizations in this neighborhood, or do different people belong to each organization?"	Bradburn, et al., 1970
	"Would you say that most people in the neighborhood are very much interested, somewhat interested, or not at all interested in neighborhood problems?" Respondent was also asked, "How about your family? Are you very much interested, somewhat interested, or not at all interested in neighborhood problems?"	Bradburn, et al., 1970
	"Most people in my neighborhood really care what happens to it. "Response categories were: "agree strongly", "agree somewhat", "neither agree nor disagree", "disagree somewhat", and "disagree strongly".	Child in the City, 1978
	"Have you ever worked with others in this neighborhood to try to solve some local problems?"	HUD, 1978
	"Have you ever taken part in forming a new group or new organization to try to solve some neighborhood problem?"	HUD, 1978

SOCIOCULTURAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	<p>"For each of the possible actions on the list, how much do you feel you and your neighbors could do to cause some real action. I mean actually get something done about these problems." Response categories were: "not anything," "a little," "some," "a good bit," and a lot." The actions listed included: a better school system; a better and more reasonable system of welfare payments; cleaning up air pollution in the Detroit area; cleaning up pollution in the Detroit River; better job placement and training, and less unemployment; less noise in residential streets and the cleaning up of trash in empty lots.</p>	Jacoby, 1972
	<p>"There are many different ways of trying to deal with conditions in a neighborhood. In attempting to deal with neighborhood conditions, have you every done any of the following in this neighborhood?" Activities asked about were: called or written a public official; joined a protest parade or picketed; formed or attended neighborhood organizations; signed a petition; talked to a priest, minister, rabbi or other religious leader; tried to do something about it myself; talked to landlord; met with other interested people; and given money to help.</p>	NORC, 1974
	<p>"How interested are most people around here in neighborhood problems? Would you say most people around here are very interested, somewhat interested, or not at all interested in neighborhood problems?"</p>	NORC, 1974
	<p>"If a development company wanted to build a high-rise apartment in this area or the city wanted to widen the street but the people were against it, what would be their chances of preventing it? Do you think they would have a very good chance of stopping it, a fairly good chance, or not much of a chance?"</p>	Quality of Life Project, 1977
	<p>"Do you happen to know anyone in this neighborhood who is an officer or very active person in an organization or club?"</p>	Warren, 1977
	<p>"Is there someone around this area who is an active person if you want to get something done?"</p>	Warren, 1977
	<p>"Since you've been living here do you think you have been adequately informed about plans for future developments, such as shopping centers, apartment houses, and other facilities in the vicinity of your home?" Respondent was also asked, "What has been the most reliable source for the information that you have gotten?" Response categories on a card were: local newspaper, friends/neighbors /family, radio/T.V., developer, community/homeowners association, or other (specify).</p>	Zehner, 1977

SOCIOCULTURAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
Social/physical activity	<p>"I'm going to read you a list of activities in some of the streets in San Francisco. For each one I read, please tell me how often, if at all, it goes on here on your street, that is, in the street itself, the sidewalks and the front yard." Response categories were: "frequently," "occasionally," or "never." The activities included: people talking; sitting outside; parents supervising children; bike riding; walking pets; roller skating; ball games, frisbee; building things; gardening; car washing; playing with toys; house painting; jogging; car repairing; and garage sales.</p>	Appleyard, 1976
	<p>"Do you think there is sufficient provision for social activities on this estate?" For those who responded negatively, the question "What would you like to see provided?" was then asked.</p>	Department of the Environment, 1972
	<p>"Some neighborhoods have a sense of activity, people and movement, while others are peaceful and quiet. Would you say this neighborhood is very active, fairly active, fairly quiet or very quiet."</p>	Fried, 1973
	<p>Observers were asked to determine intensity/congestion of human presence in the neighborhood on a seven-point scale from "sparse, little activity" to "dense, much activity."</p>	Menchik and Knight, 1974
Crime and vandalism	<p>"Which statement best describes your situation on this street and around your house with respect to danger from crime? Response categories were: "very safe," "quite safe," "neither safe, nor dangerous," "quite dangerous," and "very dangerous."</p>	Appleyard, 1976
	<p>"Have you taken any precautions to protect yourself or your home from crime?" If respondent answered affirmatively he was asked, "What precautions?" Responses were categorized as property protection (e.g. lock property, bought dog, installed alarms, or leave lights/radio on) or personal protection (e.g. avoid certain situations, such as do not walk at night, carry whistle or other alarm devise, carry a gun, or have taken self-defense program).</p>	Atkinson, 1979
	<p>"How does this part of town compare with other areas of this city? Would you say that crime in this area is higher than in other areas, lower, or about the same?"</p>	Atkinson, 1979
	<p>"Are people around here very worried, a little worried or not at all worried about crime and police protection?"</p>	Bradburn, et al., 1970
	<p>How important do you feel it is to lock your doors when you are going out of the house for just an hour or two? Would you say it is very important, somewhat important, not very important, or not at all important?"</p>	Campbell, et al., 1976, Michaelson, et al., 1976

SOCIOCULTURAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"Most neighborhoods have some trouble with the kids damaging things, digging holes, breaking windows, etc. Do you know if there is any problem like that here?"	Cooper, 1975
	"Would you say that vandalism on this estate is a great problem, rather a problem, or no problem. If respondent said vandalism is a problem, he was asked what the problem is.	Department of the Environment, 1972
	"How about any crimes which may be happening in your neighborhood - would you say they are committed mostly by the people who live here in this neighborhood or mostly by outsiders?" Response categories were: "no crimes happening in neighborhood," "people living here," "outsiders," "equally by both," and "don't know."	LEAA, 1978
	"How do you think your neighborhood compares with others in this metropolitan area in terms of crime? Would you say it is much more dangerous, more dangerous, about average, less dangerous, much less dangerous?"	LEAA, 1978
	"Within the past year or two, do you think that crime in your neighborhood has increased, decreased, or remained about the same?" Response categories were: "increased," "decreased," "same," and "haven't lived there that long."	LEAA, 1978
	"Would you say vandalism in your neighborhood is very high, moderately high, about average, moderately low, or very low?"	Michaelsen, et al., 1976
	"Some people worry about crime in their part of town while others feel there is nothing to be concerned about. How much do you worry about crime in this area: a great deal, some, a little, or not at all?" If respondent said "a great deal," "some," or "a little," they were asked, "What types of things do you worry about happening?" Response categories were: "personal assault," "robbery," "breaking and entering," and "vandalism."	Quality of Life Project, 1977
Personal safety	"Do you think this neighborhood is safer, about as safe, or less safe today than it was a year ago?"	Academy for Contemporary Problems, 1975
	Which category best describes how safe you think your neighborhood is? Responses were: "very unsafe," "somewhat unsafe," "uncertain," "safe," and "very safe."	Academy for Contemporary Problems, 1975

SOCIOCULTURAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"How would you feel about your own neighborhood as a place to live if you considered only your safety?" Answered on a scale with seven categories: "delighted," "pleased," "mostly satisfied," "mixed (about equally satisfied and dissatisfied)," "mostly dissatisfied," "unhappy," and "terrible", and two off-scale categories - "neutral," and "I never thought about it".	Andrews and Withey, 1976
	"How do you feel about how safe you feel in this neighborhood. Answered on a scale with seven categories: "delighted," "pleased," "mostly satisfied," "mixed (about equally satisfied and dissatisfied)," "mostly dissatisfied," "unhappy," and "terrible," and two off-scale categories - "neutral," and "I never thought about it."	Andrews and Withey, 1976
	"People sometimes mention that they feel afraid or worried about living on their street. Which statement best describes your feelings about this?" Response categories were: "I've never felt afraid or worried because of my street and what happens on it", "I've only felt afraid or worried on rare occasions", "I sometimes feel afraid or worried", "I often feel afraid and worried", and "I constantly feel afraid or worried".	Appleyard, 1976
	"What is it that makes you feel this way about the safety of the development? How safe do you feel the surrounding neighborhood is?" Response categories were: "very safe," "somewhat safe," and "very unsafe."	Becker, 1974
	"How safe do you feel or would you feel being out alone in your neighborhood during the day?" Response categories were: "very safe," "reasonably safe," "somewhat unsafe," and "very unsafe."	City of Cincinnati, 1978
	"Is the neighborhood dangerous enough to make you think seriously about moving somewhere else?"	LEAA, 1978
	"How about during the day - how safe do you feel or would you feel being out alone in your neighborhood?" Response categories were: "very safe," "reasonably safe," "somewhat unsafe," and "very unsafe."	LEAA, 1978
	"How safe do you feel outside on your block during the daytime?" Response categories were: "very safe," "fairly safe," "not too safe," and "not at all safe."	Lawton, 1980
	"Are there places in your neighborhood where you're afraid to go?" If respondent answered affirmatively, he was asked, "Is that because you're afraid of people or something physical (for example traffic, dogs, quicksand)?" Respondent was asked to describe exactly what or who he was afraid of, and to describe exactly where it is or they are.	Michelson, 1977

SOCIOCULTURAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"How would you rate the safety of this neighborhood this year as compared to last year? Would you say this neighborhood is now a safer place to live, not as safe a place to live, or the same as last year?"	NORC, 1974
Personal safety at night	"It would be safe to take an evening stroll in my neighborhood." Response categories were: "completely false," "somewhat false," "both true and false," "somewhat true," and "completely true."	Andrews and Withey, 1976
	"How safe do you feel (name of development) is at night?" Response categories were: "don't go out at night," "very safe," "somewhat safe," and "very unsafe."	Becker, 1974
	"How safe do you feel or would you feel about being out alone in your neighborhood at night?" Response categories read: "very safe," "reasonably safe," "somewhat unsafe," and "very unsafe."	City of Cincinnati, 1978, LEAA, 1978
	"Do you feel safe walking home alone at night?"	Cooper, 1975
	"Turning now to police protection and public safety, how safe would you feel walking alone in this neighborhood at night? Would you feel very safe, reasonably safe, somewhat safe, or very unsafe?"	Hatry, et al., 1977
	"How safe do you feel outside on your own block at night? Response categories were: "very safe," "fairly safe," "not too safe," and "not at all safe."	Lawton, 1980
	"How safe do you or would you feel being out alone in your neighborhood at night? Would you say it was very safe, somewhat safe, somewhat unsafe, or very unsafe?"	Michaelsen, et al., 1976
	"Would you say that it is safe to go out walking here at night?"	NORC, 1974, Campbell, et al., 1976
	"Is there any area right around here - that is, within a mile where you would be afraid to walk alone at night?"	NORC, 1978
	"It is quite safe for women and children to be out alone at night in this community." Response categories were: "agree strongly," "agree somewhat," "disagree somewhat," and "disagree strongly."	Zehner, 1977
Management	"How satisfied are you with the management of the development?" Response categories were: "very satisfied," "somewhat satisfied," and "very unsatisfied?" Respondent was then asked, "Why do you feel this way?"	Becker, 1974

SOCIOCULTURAL MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	"Do you feel that the rules and regulations here, about what you can do with your house and yard, paying rent, notifying your income, etc., are generally fair or unfair?"	Cooper, 1975
Privacy	"Do you people have a place where you can be out in your yard and feel that you can really have privacy from your neighbors?"	Lansing and Hendricks, 1967, Lansing, et al., 1970
	"How satisfied are you with the amount of privacy you have here: that is, being able to do what you wish without other people seeing you or hearing you? Would you say that you are very satisfied, fairly satisfied, or not very satisfied?"	Lawton, 1980
	Town planning student was asked to rate the privacy available indoors and outdoors. Categories were: "very good," "good," "average," "poor," and "very poor."	Troy, 1971

COMBINED MEASURES

CONCEPT	DESCRIPTION	SOURCE
	<p>In addition to individual questions asking respondents about specific attributes in the neighborhood, lists have been used by researchers to obtain ratings, perceptions and preferences (choices) for a wide range of neighborhood attributes or conditions. Often, lists contain attributes which cannot neatly be grouped into the categories described above. We have therefore selected several questions which rely on lists of attributes and conditions to which people were to respond. In most instances, show cards were used to either portray the list of neighborhood attributes under study or to indicate the response categories the respondent was to use. Some lists have been used in connection with verbal responses; others have relied on a self-administered format.</p>	
	<p>"I'm going to read you some things that are problems for some people in their neighborhoods. Please tell me if they are a big problem, somewhat of a problem, or not a problem at all in your neighborhood." Items included: streets in poor repair, the amount of noise in the area, litter and trash on the streets, heavy traffic in the streets, presence of drugs and drug users, crime in the area, abandoned housing or other empty buildings, and vacant lots filled with trash and junk.</p>	Abt Associates, 1974
	<p>"The following questions are concerned with different aspects of your present neighborhood. Here is a list of conditions which many people have on their streets. Which, if any, do you have?" Conditions were: street and highway noise, heavy traffic, streets or roads continually in need of repair, poor street lighting, neighborhood crime, trash, litter or junk in the street or on empty lots, or on properties in this neighborhood, boarded-up or abandoned structures, occupied housing in rundown condition, industries, businesses, stores, or other nonresidential activities, odors, smoke, or gas, and noise from airplane traffic. For respondents who answered affirmatively to a condition, the question, "Does the (condition) bother you?" was asked. Finally, for those saying a condition was bothersome, the question, "Is it so objectionable that you would like to move from the neighborhood?" was asked.</p>	AHS, 1976
	<p>"The following questions are concerned with neighborhood services. Do you have adequate or satisfactory _____." Services asked about were: public transportation, schools, neighborhood shopping such as grocery stores, or drug stores, police protection, fire protection and hospitals or health clinics? For respondents who said no, the question: "Is the (service) so inadequate or unsatisfactory that you would live to move from the neighborhood?" was asked.</p>	AHS, 1976

COMBINED MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	<p>"I'm going to read you what the city does. For each one please tell me how good a job the city does on this street." Items included: cleaning the street, having the street cleaners come often enough, maintain the surface of the street in good condition, and taking care of the plantings on the street. Response categories were "excellent job," "very good job," "fairly good job," "not very good job," and "poor job."</p>	Appleyard, 1976
	<p>"Now I'd like to ask you some questions about your area. Please tell me how good you think each of these things is using one of the answers on the card. First, how would you describe the condition of the streets - how maintained are they? How about the parks in the area, the recreation facilities, the condition of the homes and buildings in the area, quality of schools around here, playgrounds for children to play, the health and medical care facilities, how would you describe the quality of the air that is, the absence of pollution, dirt and fumes in the air, the shopping facilities, the amount of privacy you have and the people who live around here as neighbors." Response categories ranged from "excellent" to "poor" on a seven-point scale.</p>	Atkinson, 1979
	<p>"Now I'd like to ask you a few questions about problems in some neighborhoods. Please tell me whether or not you think they are problems here." Respondent was read a list of items and asked to indicate whether they were a very serious, serious, or not a serious problem for him. The items were: air pollution, traffic, crime and violence in the streets, property availability and housing, quality of local public schools, public transportation, availability of recreation facilities, and race relations.</p>	Butler et al., 1969
	<p>"Would you please tell me if you are satisfied, somewhat dissatisfied, or very dissatisfied with the following things about this neighborhood." Items included: quietness of the neighborhood, privacy of the neighborhood, reputation of the neighborhood, kinds of people who live in the neighborhood, cleanliness of the neighborhood, quality of public education in the school district, fire protection, police protection, number of parks or other open spaces, and ease of getting to other places from here.</p>	Butler et al., 1969

COMBINED MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	<p>"Would you please tell me which things listed on this card were important in your decision to move out of your previous place?" Items included were: wanted a better neighborhood, wanted a location closer to the job, wanted a location closer to friends, wanted a generally more convenient location, the old neighborhood was changing physically, the neighborhood was becoming unsafe, the neighborhood was changing radically, and the public schools weren't very good. If respondents mentioned more than one item as being important, the question "Of these, which was the single most important in your decision to move?" was asked.</p>	Butler et al., 1969
	<p>"If you were to move, how important would each of the items on this card be to you in choosing a new neighborhood? For each one, please tell me whether it would be very important, somewhat important or not particularly important to you in choosing a new neighborhood." Items included: the school system, houses kept up and painted, a child day care center, clean streets and yards free of litter, a library nearby, Black police serving neighborhood, having only light traffic on the streets in the area, neighborhoods where kids don't get into trouble, neighborhood where there are no demonstrations or violence, have neighbors who earn the same amount of money, having friendly neighbors, where most of the people are Black, having year-around teenage recreation center, and having a summer recreation program.</p>	Chapin, 1972
	<p>"For each of the following, do you feel it is absolutely necessary, important, not absolutely necessary or not important wherever you live to have:" food shopping facilities in the neighborhood, other good shopping facilities in the neighborhood, good recreational facilities in the neighborhood?</p>	Fried, 1973
	<p>"Wherever you live, would the following be absolutely necessary, important but not necessary, not important or something you wouldn't want?" The items were: to be within 10 or 15 minutes from work, to have relatives in the neighborhood, to live where you can spend time outdoors easily, be close to public transportation, to live where most people share your ethnic background, to live in an area that has a sense of activity, people and movement, to live close to a large city, to live in an area where people have income levels similar to yours, to live within easy reach of the countryside or other natural surroundings, to live where there is a real sense of neighborhood and community, to live close to a church or temple of your denomination, and to have close friends in the neighborhood.</p>	Fried, 1973

COMBINED MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	<p>"Is this area poor, fair, good or excellent for: being able to spend time outdoors easily, feeling you are safe on the streets, being within reach of the country, the shore or other similar places; and being close to your church, temple or synagogue."</p>	Fried, 1973
	<p>"Here is a list of some of the things people think about when they are moving to a new neighborhood. When you moved here were any of these things important to you?" Respondents were handed a card with the following items: churches nearby, good schools nearby, attractive appearance of the neighborhood, location close to work, location convenient to stores, a location near old friends or relatives, and open space nearby.</p>	Lansing and Hendricks, 1967
	<p>"Below are some words and phrases which we would like you to use to describe the neighborhood as it seems to you. By neighborhood, we mean roughly the area near here which you can see from your front door, that is the five or six homes nearest to yours around here. For example, if you think the neighborhood is noisy, put a mark in the circle next to the word 'noisy.' If you think it is quiet, put a mark next to 'quiet.' If you think it is somewhere in between, please put a mark where you think it belongs." The following paired adjectives were used on a seven-point scale: noisy-quiet, attractive-unattractive, unfriendly people-friendly people, enough privacy-not enough privacy, poorly kept up-well kept up, people who are like me-people who are not like me, convenient-inconvenient, very poor place to live-very good place to live, safe-unsafe bad reputation-good reputation, crowded-uncrowded, no traffic-alot of traffic, many children-no children, clean-dirty, rich-poor, unfriendly-friendly, interesting-boring, new-old, all the same-varied, fast-slow, calm-busy.</p>	Lansing and Hendricks, 1967, Lansing, et al, 1970, Zehner and Chapin, 1974, Rodgers, et al., 1975, Zehner, 1977, Marans and Wellman, 1978
	<p>"Now I'm going to show you a card that has a list of descriptions of people. I would like you to select any phrases or words you think describe your current neighbors. Just read out the letter for each one." Adjectives used included: friendly, lively, fashionable, ready to help, withdrawn, child-oriented, flexible, proud of property, parents, lazy, serious, sloppy, outgoing, live mainly for the present, do things mainly as a family, neat, has expensive taste, thrifty, easy going, individualistic, efficient, wrapped up in work, handy, cultural, concerned mainly with the future, going up in the world, and modern.</p>	Michelson, 1977

COMBINED MEASURES (continued)

CONCEPT	DESCRIPTION	SOURCE
	<p>"For each of the statements I'm going to read now, please tell me if it is something you like about the place where you live, something you dislike about the place where you live, or something that doesn't matter to you. Items were: the distance from here to the place where (you/your husband/ your wife) work(s); the distance from here to the place where (you shop/your family shops) for food; the type of people who live around here; and the appearance of the neighborhood.</p>	NORC, 1974
	<p>"I'll read you some things that are problems for some people in their neighborhood. Please tell me if they are a big problem, somewhat of a problem, or not a problem to you in your neighborhood?" Problems asked about were: streets in poor repair; the amount of noise in the area; litter and trash in the streets; heavy traffic in the streets; presence of drugs and drug users; crimes in the area; abandoned houses or other empty buildings; and vacant lots filled with trash and junk.</p>	NORC, 1974
	<p>"I'm going to read you a list of problems that exist in some neighborhoods in the three-county area. Please tell me whether you think each is a big problem in this neighborhood, somewhat of a problem or not a problem at all." The items were: noisy neighbors, vandalism-tearing things up, breaking things, abandoned houses, winos and junkies, noisy motorcycles, children and teenagers who misbehave, poorly kept up yards, dogs running loose, and traffic.</p>	Rodgers et al., 1975
	<p>"Here is a list of problems that people have right in their own neighborhoods at one time or another. (In the last five years/since you have been living here) would you say that you and your family has had alot of problems, some problems, only a few problems or no problems at all with?" Items included: noisy, disorderly or undesirable neighbors, a neighbor who failed to keep up his property, a landlord who didn't make repairs or provide service, neighbors who drink too much, dogs running loose, and neighborhood kids getting in trouble with the police.</p>	Zehner and Chapin, 1974

REFERENCES

- Abt Associates, Inc. "Housing Allowance Demand Experiment," Instrumentation, Cambridge, Massachusetts, 1974.
- Ahlbrandt, Roger S., Jr. "Neighborhood Preservation, Neighborhood Attitudes and Citizen Participation." Unpublished paper, n.d.
- Ahlbrandt, Roger S., and Paul C. Brophy. "Management: An Important Element of the Housing Environment." Environment and Behavior, 1976, 8, 505.
- American Public Health Association, Committee on the Hygiene of Housing. Planning the Neighborhood. Chicago: Public Administration Service, 1960.
- Andrews, Frank M. "Social Indicators of Perceived Life Quality." Social Indicators Research, 1974, 279-299.
- Andrews, Frank M. "Subjective Social Indicators, Objective Social Indicators, and Social Accounting Systems." Ann Arbor: Institute for Social Research, The University of Michigan, 1980.
- Andrews, Frank M., and Stephen B. Withey. Social Indicators of Well-Being: Americans' Perceptions of Life Quality. New York: Plenum Press, 1976.
- Andrews, Frank M., and Aubrey C. McKennell. "Measures of Self-Reported Well-Being: Their Affective, Cognitive and Other Components." Social Indicators Research, 1980, 8, 127-155.
- Angrist, Shirley S. "Dimensions of Well-Being in Public Housing." Environment and Behavior, 1974, 6, 495-516.
- Appleyard, Donald, and Mark Lintell. "The Environmental Quality of City Streets: The Residents' Viewpoint." Journal of the American Institute of Planners, 1972, 38, 84-101.
- Appleyard, Donald with M. Sue Gerson and Mark Lintell. Livable Urban Streets. Washington, D.C.: Federal Highway Administration, 1976.
- Appleyard, Donald with M. Sue Gerson and Mark Lintell. Livable Streets. Berkeley and Los Angeles, California: The University of California Press, 1981.
- Atkinson, Tom. "Is Satisfaction a Good Measure of the Perceived Quality of Life?" In Proceedings of the Social Statistics Section of the American Statistical Association. Washington, D.C.: American Statistical Association, 1977.
- Babbie, E. Survey Research Methods. Belmont, California: Wadsworth, 1973.
- Bagley, Christopher, Solomon Jacobson and Clare Palmer. "Social Structure and the Ecological Distribution of Mental Illness, Suicide, and Delinquency." Psychological Medicine, 1973, 3, 177-187.

- Bailar, B., and C. Brooks. "An Error Profile: Employment as Measured by the Current Population Survey." Statistical Policy Working Paper 3. U.S. Department of Commerce, 1978.
- Baldassare, Mark. "The Effects of Density on Social Behavior and Attitudes." American Behavioral Scientist, 1975, 18, 815-825.
- Barker, Mary L. "Planning for Environmental Indices: Observer Appraisals of Air Quality." In Craik, Kenneth H., and Ervin H. Zube (Eds.), Perceiving Environmental Quality. New York: Plenum Press, 1976.
- Barton, Allen H. "Observations on Neighborhood Satisfaction in New York City." Unpublished paper, August, 1975.
- Bauer, R. Social Indicators. Cambridge, Massachusetts: M.I.T. Press, 1966.
- Becker, Franklin D. Design for Living: The Residents' View of Multi-Family Housing. Center for Urban Development Research, Cornell University, 1974.
- Berger, R. Working Class Suburbs: A Study of Auto Workers in Suburbia. Los Angeles, California: University of California Press, 1960.
- Bhandari, N. P., and Harold Hill. "A Medico-Social Study of Rehousing." Journal of the Royal Institute of Public Health and Hygiene, 1960, 23, 187-204.
- Bielby, W.. Measuring Neighborhood Quality in the Annual Housing Survey. U.S. Department of Housing and Urban Development, Office of Policy Development and Research, 1979.
- Boston Neighborhood Study, Instrumentation, Center for Research, A Facility of The University of Massachusetts and the Joint Center for Urban Studies at M.I.T. and Harvard University, 1980.
- Bradburn, Norman M., Seymour Sudman and Galen Gockel. Racial Integration in American Neighborhoods. Chicago: National Opinion Research Center, The University of Chicago, 1970.
- Brower, Sidney N. and Penelope Williamson. "Outdoor Recreation as a Function of the Urban Housing Environment." Environment and Behavior, 1974, 6, 295-345.
- Brown, L. A., and E. G. Moore. "The Intra-Urban Migration Process: A Perspective." General Systems, 1970, 15, 109-122.
- Burby, Raymond J. Household Decision Processes in the Purchase and Use of Reservoir Recreation Land. Chapel Hill, North Carolina: Center for Urban and Regional Studies, University of North Carolina at Chapel Hill, Water Resources Research Institute Report No. 51, March, 1971.
- Butler, Edgar W., F. Stuart Chapin, Jr., George C. Hemmens, Edward J. Kaiser, Michael A. Stegman and Shirley F. Weiss. Moving Behavior and Residential

- Choice; A National Survey. Washington, D.C.: Highway Research Board, 1969.
- Buttimer, A. "Social Space and the Planning of Residential Areas." Environment and Behavior, 1972, 4.
- Campbell, Angus, and Philip E. Converse (Eds.). The Human Meaning of Social Change. New York: Russell Sage Foundation, 1972.
- Campbell, Angus, Philip E. Converse and Willard L. Rodgers. The Quality of American Life: Perceptions, Evaluations and Satisfaction. New York: Russell Sage Foundation, 1976.
- Caplow, Theodore, and Robert Forman. "Neighborhood Interaction in a Homogeneous Community." American Sociological Review, June, 1950, 15, 357-366.
- Carp, Frances M. "Long Range Satisfaction with Housing." The Gerontologist, 1975, 15.
- Carp, Frances M., Rick T. Zawadski and Hossein Shokrkon. "Dimensions of Urban Environmental Quality." Environment and Behavior, June, 1976, 8, 239-264.
- Chapin, F. Stuart, Jr., Edgar W. Butler and Frederick C. Patten. Blackways in the Inner City. Chapel Hill: Center for Urban and Regional Studies, University of North Carolina, 1972
- Chapin, F. Stuart, Jr., and Shirley F. Weiss. Urban Growth Dynamics. New York: John Wiley and Sons, 1962.
- Child in the City. Instrumentation. Toronto, Canada: University of Toronto's Child in the City Program, 1978.
- City of Cincinnati, Service Monitoring Survey, Instrumentation, January, 1978.
- Clark, W. A. V., and M. Cadwallader. "Locational Stress and Residential Mobility." Environment and Behavior, March 1973, 29-41.
- Connerly, Charles. Specialization of Neighborhood Use: How People Vary in the Utilization of Their Neighborhoods. Unpublished Ph.D. dissertation, The University of Michigan, 1980.
- Cooper, Clare. "Resident Dissatisfaction in Multi-Family Housing." In W. M. Smith (ed.), Behavior, Design and Policy Aspects of Human Habitats. Green Bay: University of Wisconsin--Green Bay Press, 1972, 119-145.
- Cooper, Clare. "The House As Symbol of Self." In Jon Lang, Charles Burnette, Walter Moleski, and David Vachon (eds.), Designing for Human Behavior. Stroudsburg, PA.: Dowden, Hutchinson and Ross, 1974.
- Cooper, Clare C. Easter Hill Village. New York: The Free Press, 1975.

- Curtin, Richard T., and Robert W. Marans. "Gautreaux Housing Demonstration Program," Survey Research Center, The University of Michigan, 1979.
- Dallas City Profile Survey, Instrumentation, 1975.
- Davidson, J. Political Partnerships: Neighborhood Residents and Their Council Members. Beverly Hills, California: Sage, 1979.
- Dear, Michael, and S. Martin Taylor. "Community Attitudes toward Neighborhood Public Facilities." Hamilton, Ontario: Department of Geography, McMaster University, September 1979.
- DeGroot, I., W. Loring, A. Rihm, S. W. Samuels and W. Winkelstein. "People and Air Pollution: A Study of Attitudes in Buffalo, N.Y." Journal of Air Pollution Control Association, 1966, 16, 245-247.
- Dennis, Norman. "The Popularity of the Neighborhood Idea." In A. E. Pahl (ed.), Readings in Urban Sociology. London: Pergamon, 1968, 74-92.
- Department of the Environment. The Estate Outside the Dwelling. London: Her Majesty's Stationery Office, 1972.
- Detroit City Plan Commission. Renewal and Revenue. Detroit, Michigan, 1962.
- Dewey, Richard. "The Neighborhood, Urban Ecology, and City Planners." American Sociological Review, 1950, 15, 502-507.
- Dunham, H. W. Community and Schizophrenia. Detroit: Wayne State University Press, 1965.
- Everitt, John, and Martin Cadwallader. "The Home Area Concept in Urban Analysis: The Use of Cognitive Mapping and Computer Procedures as Methodological Tools." In W. Mitchell (ed.), EDRA 3. Los Angeles: University of California, 1971, 1, 1-2-1 - 1-2-10.
- Fava, Sylvia F. "Contrast in Neighboring: New York City and a Suburban County." In The Suburban Community, edited by William Dobriner, New York: G.P. Putnam, 1958, 122-131.
- Ferguson, T., and M. G. Pettigrew. "A Study of 718 Slum Families Rehoused for Upwards of Ten Years." Glasgow Medical Journal, 1954, 35, 183-201.
- Festinger, L., S. Schachter and K. Back. Social Pressures in Informal Groups. New York: Harper and Brothers, 1950.
- Fischer, Claude S. The Urban Experience. New York: Harcourt, Brace, and Jovanovich, 1976.
- Fischer, Claude S., and Robert Max Jackson. "Suburbs, Networks, and Attitudes." In Barry Schwartz (Ed.), The Changing Face of the Suburbs, 279-308. Chicago: University of Chicago Press, 1976.
- Francescato, Guido, Sue Weidemann, James R. Anderson and Richard Chenowith. Residents' Satisfaction in HUD-Assisted Housing: Design and Management

- Factors. Housing Research and Development Program, University of Illinois at Urbana-Champaign, March, 1979.
- Fried, Marc. "A Study of Residential and Community Experience," Instrumentation, National Analysts, Inc. Philadelphia, Pa., 1973.
- Fried, Marc, and Peggy Gleicher. "Some Sources of Residential Satisfaction in an Urban Slum." Journal of the American Institute of Planners, Nov. 1961, 27, 305-315.
- Gallup, G. "The Gallup Poll, March 2: Urban America." Also reproduced in The Gallup Poll: Public Opinion 1978. Wilmington, Delaware: Scholarly Resources, Inc., 1979.
- Gans, H. J. People and plans. New York: Basic Books, 1968.
- Gans, H. J. The Urban Villagers: Group and Class in the Life of Italian Americans. New York: Free Press, 1962.
- Gans, Herbert J. "The Human Implications of Current Redevelopment and Relocation Planning." Journal of the American Institute of Planners, February 1959, 25, 15-25.
- Gans, Herbert J. The Levittowners. New York: Pantheon Books, 1967.
- Ginsberg, Yona, and Robert W. Marans. "Social Mix in Housing: Does Ethnicity Make a Difference?" The Journal of Ethnic Studies, February, 1979, 7, 101-112.
- Glass, R. The Social Background of a Plan. London: Routledge and Kegan Paul, 1964.
- Golledge, R., and G. Zannaras. "Cognitive Approaches to the Analysis of Human Spatial Behavior." In W. Helson (Ed.), Environment and Cognition. New York: Seminar Press, 1973.
- Gollin, Albert E., Mary Eileen Dixon and Andrea E. Golden. Social Patterns and Attitudes in Greater Washington, 1973-1975. Washington, D.C.: Bureau of Social Science Research, Inc., 1975.
- Greenberg, Stephanie, William Rohe and Jay Williams. Safe and Secure Neighborhoods: Physical Characteristics and Informal Territorial Control in High and Low Crime Areas. Research Triangle Institute, North Carolina, 1981.
- Greenbie, Barrie. "New House or New Neighborhood? A Survey of Priorities Among Homeowners in Madison, Wisconsin." Land Economics, 1969, 45, 359-365.
- Guterbock, T.M. Machine Politics in Transition: Party and Community in Chicago. Chicago: University of Chicago Press, 1980.

- Hall, John F., and A. James Ring. Indicators of Environmental Quality and Life Satisfaction: A Subjective Approach. London: Survey Unit Social Science Research Council, 1974.
- Hamovitch, M., and J. Peterson. "Housing Needs and Satisfaction of the Elderly." The Gerontologist, 1969, 9, 30-32.
- Haney, Wava S., and Eric S. Knowles. "Perceptions of Neighborhoods by City and Suburban Residents." Human Ecology, 1978, 6, 201-214.
- Hartman, C. "Social Values and Housing Orientations." Journal of Social Issues, 1963, 19.
- Hatry, Harry P., Louis H. Blair, Donald M. Fisk, John H. Greiner, John R. Hall, Jr. and Philip S. Schaenman. How Effective Are Your Community Services? Procedures for Monitoring the Effectiveness of Municipal Services. Washington, D.C.: The Urban Institute, 1977.
- Hoinville, Gerald. "Evaluating Community Preferences." In J.T. Coppock and C.B. Wilson (Eds.), Environmental Quality: With Emphasis on Urban Problems. New York: Halsted Press, 1974.
- Hooper, J. M. H. "Disease, Health and Housing." Medical Officer, 1962, 107.
- Howell, Joseph T. Hard Living on Clay Street: Portrait of Blue Collar Families. Garden City, New York: Anchor Books, 1973.
- Hunter, Albert. Symbolic Communities: The Persistence and Change of Chicago's Local Communities. Chicago: The University of Chicago Press, 1974.
- Isaacs, Reginald R. "The Neighborhood Theory: An Analysis of Its Adequacy." Journal of the American Institute of Planners, 1948, 14, 15-23.
- Jacobs, Jane. The Death and Life of Great American Cities. New York: Random House, 1961.
- Jacoby, Louis R. Perception of Air, Noise and Water Pollution in Detroit. Michigan Geographical Publication, No. 7. Ann Arbor: Department of Geography, The University of Michigan, 1971.
- Johnson, Robert E. Assessing Housing Preferences of Low Cost Single Family Home Buyers. Ann Arbor: The Architectural Research Laboratory, The University of Michigan, 1980.
- Jonsson, Erland, et al. "Annoyance Reactions to Traffic Noise in Italy and Sweden." Archives of Environmental Health, November, 1969, 19, 692-699.
- Kain, John, and John M. Quigley. "Evaluating the Quality of the Residential Environment". Cambridge, Massachusetts: Program on Regional and Urban Economics, Harvard University, October, 1969.
- Kaiser, E. J., S. F. Weiss, R. J. Bunby and T. G. Donnelly. "Neighborhood Environment and Residential Satisfaction: A Survey of the Occupants and

- Neighborhoods of 166 Single-Family Homes in Greensboro, North Carolina." Research Previews, 1970, 17, 11-25.
- Kasarda, John D., and Morris Janowitz. "Community Attachment in Mass Society." American Sociological Review, June, 1974, 29, 322-339.
- Kasl, Stanislav V. "The Effects of the Residential Environment on Health and Behavior: A Review." In Lawrence E. Hinkle, Jr., and William C. Loring (Eds.), The effect of the Man-Made Environment on Health and Behavior. Atlanta: Center for Disease Control, N.C. Department of Health, Education and Welfare, 1977.
- Kasl, S., and E. Harburg. "Perceptions of the Neighborhood and the Desire to Move Out." Journal of the American Institute of Planners, September 1972, 38, 318-324.
- Keller, Suzanne. The Urban Neighborhood. New York: Random House, 1968.
- Kornblum, W. Blue Collar Community. Chicago: The University of Chicago Press, 1974.
- Kryter, K. D. "The Meaning and Measurement of Perceived Noise Level." Noise Control, 1960, 6, 12-27.
- Ladd, F. "Black Youths View Their Environment: Neighborhood Maps." Environment and Behavior, 1968.
- Land, K. "Social Indicator Models: An Overview." In K. Land and S. Spilerman (Eds.), Social Indicator Models. New York: Russell Sage Foundation, 1975, 5-36.
- Lansing, John B., and Gary Hendricks. Living Patterns and Attitudes in the Detroit Region. Ann Arbor: Institute for Social Research, The University of Michigan, January, 1967.
- Lansing, J.B., and R.W. Marans. "Evaluation of Neighborhood Quality." Journal of the American Institute of Planners, 1969, 35, 195-199.
- Lansing, J.B., E. Mueller and N. Barth. "Residential Location and Urban Mobility." Ann Arbor: Institute for Social Research, The University of Michigan, 1964.
- Lansing, John B., Robert W. Marans and Robert B. Zehner. Planned Residential Environments. Ann Arbor: Institute for Social Research, The University of Michigan, 1970.
- Lawton, M. Powell. "The Physical Environment and Residential Satisfaction," paper presented at the annual meeting of the American Psychological Association. Toronto, Canada, 1978.
- Lawton, M. Powell. Philadelphia Geriatric Center Multilevel Assessment Instrument. Philadelphia, Pa.: Philadelphia Geriatric Center, 1980.

- Lawton, M. Powell, and M. H. Kleban. "Assessment: The Concept and Prospects." Unpublished paper, 1979, Philadelphia Geriatric Center, Philadelphia, Pennsylvania.
- Lazarsfeld, P., and H. Menzel. "On the Relation Between Individual and Collective Properties." In A. Etzioni (Ed.), Complex Organizations. New York: Holt, Rinehart, and Winston, 1968.
- (LEAA) Law Enforcement Assistance Administration. Oakland: Public Attitudes About Crime. Washington, D.C.: U.S. Government Printing Office, July 1978.
- Lee, Terrence R. "Psychology of Living Space." Transactions of the Bartlett Society, 1963, 2.
- Lee, Terrence R. "Urban Neighborhood as a Socio-Spatial Schema." Human Relations, 1968, 21, 241-268.
- Lee, Terrence R. "The Psychology of Spatial Orientation." Architectural Association Quarterly, July, 1969, 1, 11-15.
- Lee, Trevor, and Robert W. Marans. "Objective and Subjective Indicators: Effects of Scale Discordance on Interrelationships." Social Indicators Research, 1960, 8, 47-64.
- Marans, Robert W. "Kiryath Gat: An Experimental New Town." In The Role of Housing in Promoting Social Integration. New York: United Nations, Center for Housing, Building and Planning, 1978.
- Marans, Robert W. The Determinants of Neighborhood Quality: An Analysis of the 1976 Annual Housing Survey. U.S. Department of Housing and Urban Development, Office of Policy Development and Research, 1979.
- Marans, Robert W., and Willard Rodgers. "Toward an Understanding of Community Satisfaction." In Amos Hawley and Vincent Rock (Eds.), Metropolitan American in Contemporary Perspective, New York: Halsted, 1975, 295-354.
- Marans, R. W., S. J. Newman, J. D. Wellman and J. Kruse. Waterfront Living: A Report on Permanent and Seasonal Residents in Northern Michigan. Ann Arbor: Institute for Social Research, The University of Michigan, 1976.
- Marans, Robert W., and John D. Wellman. The Quality of Nonmetropolitan Living: Evaluations, Behaviors, and Expectations of Northern Michigan Residents. Ann Arbor: Survey Research Center, Institute for Social Research, The University of Michigan, 1978.
- Marans, Robert W., and J. Mark Fly. Recreation and the Quality of Urban Life: Recreational Resources, Behaviors, and Evaluations of People in the Detroit Region. Ann Arbor: Institute for Social Research, The University of Michigan, 1981.
- Menchik, Mark, and Robert Knight. Residential Environmental Attitudes and Preferences: Report of a Questionnaire Survey. Madison: Institute for

- Environmental Studies, Report No. 24, University of Wisconsin, October, 1974.
- Mercer, C. "What Neighborhood?" New Society, 1976, 22, 154-156.
- Merton, R., and A. Kitt. "Contributions to the Theory of Reference Group Behavior." In R. Merton and P. Lazarsfeld (Eds.), Continuities in Social Research. Glencoe, Illinois: The Free Press, 1950.
- Michaelsen, Larry K., Donald A. Murray, Neal J. Dickerman, Jr., Howard E. VanAuken and Marjorie Earley. "Quality of Life in Oklahoma- Preliminary Results." Norman, Oklahoma: Center for Economic and Management Research, University of Oklahoma, November, 1976.
- Michelson, William. "An Empirical Analysis of Urban Environmental Preference." Journal of the American Institute of Planners, 1966, 32, 355-360.
- Michelson, William. Man and His Urban Environment: A Sociological Approach. Reading, Massachusetts: Addison-Wesley Publishing Co., 1970.
- Michelson, William. Environmental Choice, Human Behavior, and Residential Satisfaction. New York: Oxford University Press, 1977.
- Mitchell, R.E. "Some Social Implications of High Density Housing." American Sociological Review, 1971, 36, 18-29.
- Mogey, J. M. Family and Neighborhood. London: Oxford University Press, 1956.
- Morris, E. W., S. R. Crull and M. Winter. "Housing Norms, Housing Satisfaction and the Propensity to Move." Journal of Marriage and the Family, 1976, 38, 309-320.
- National Opinion Research Center, University of Chicago, Survey 458, Wave III, Instrumentation, September, 1963.
- National Opinion Research Center. Continuous National Survey: A Compendium of Questionnaire Items, Cycles 1 through 12. Chicago: The University of Chicago, 1974.
- National Opinion Research Center. General Social Surveys, 1972-1978: Cumulative Codebook. Chicago: The University of Chicago, 1978.
- Nathanson, Constance A., Jeanne S. Newman, Elizabeth Moen and Helen Hiltabiddle. "Moving Plans Among Residents of a New Town." Journal of the American Institute of Planners, July 1976, 42, 295-302.
- Newman, Sandra J., and Greg J. Duncan. "Residential Problems, Dissatisfaction and Mobility." In Duncan, Greg J. and James N. Morgan (Eds.), Five Thousand American Families - Patterns of Economic Progress. Ann Arbor: Institute for Social Research, The University of Michigan, 1978.

- Norcross, Carl, Townhouses and Condominiums: Residents' Likes and Dislikes. Washington, D.C.: Urban Land Institute, 1973.
- O'Dell, Doyal D. The Park Hill Area of Denver: An Integrated Community. Virginia: National Technical Information Service,
- Orleans, Peter, and Sophie Schmidt. "Mapping the City: Environmental Cognition of Urban Residents." In W. Mitchell (ed.), EDRA 3. Los Angeles: University of California, 1972, 1-4-1 - 1-4-9.
- Park, R.E. Human Communities. Glencoe, Illinois: Free Press, 1952.
- Park, Robert, E. Burgess and R. McKenzie. The City (4th Ed.), Chicago: University of Chicago Press, 1967.
- Perry, Clarence. "The Neighborhood Unit." Regional Survey for New York And Its Environs, 1929, 7.
- Peterson, G.L. "A Model of Preference: Qualitative Analysis of the Perception of the Visual Appearance of Residential Neighborhoods." Journal of Regional Science, 1967, 7, 19-32.
- Peterson, G. L., and R. D. Worrall, "An Analysis of Individual Preferences for Accessibility to Selected Neighborhood Services" paper prepared for the 49th Annual Meeting of the Highway Research Board, Washington, D.C., 1970.
- Quality of Life Project. "Social Change in Canada: Trends in Attitudes, Values and Perceptions." Toronto, Ontario: Institute for Behavioural Research, York University, 1977.
- Rakove, M. Don't Make Waves--Don't Back No losers. Bloomington, Indiana: Indiana University Press, 1975.
- Ridker, Ronald G., and John A. Henning. "The Determinants of Residential Property Values with Special Reference to Air Pollution." Review of Economics and Statistics, 1967, 49, 246-257.
- Robinson, Ira, W. C. Baer, T. K. Banerjee and P. G. Flachsbart. "Trade-off Games." In W. Michelson (Ed.), Behavioral Research Methods in Environmental Design. Stroudsburg, Pennsylvania: Dowden, Hutchinson and Ross, 1975.
- Rodgers, Willard L., and P.E. Converse. "Measures of the Perceived Overall Quality of Life." Social Indicators Research, 1975, 2, 127-152.
- Rodgers, Willard L., Robert W. Marans, Stephen D. Nelson, Sandra J. Newman and Orian Worden. The Quality of Life in the Detroit Metropolitan Area: Frequency Distributions. Ann Arbor: Institute for Social Research, The University of Michigan, 1975.
- Ross, L. H. "The Local Community: A Survey Approach." In Robert Gutman and David Popenoe (Eds.), Neighborhood, City, and Metropolis. New York: Random House, 1970, 557-568.

- Ross, L.H. "Reasons for Moves to and from a Central City Area." Social Forces, 1961, 40, 261-263.
- Rossi, P. H. Why Families Move: A Study in the Social Psychology of Urban Residential Mobility. Glencoe, Illinois: The Free Press, 1955.
- Royal Commission on Local Government in England. Research Studies: Community Attitudes Survey. London: Her Majesty's Stationery Office, 1969.
- Sadacca, Robert, Morton L. Isler and Margaret Drury. "Housing Management: A Second Progress Report." Washington, D.C.: The Urban Institute, Report No. 209-1, December, 1971.
- Sanoff, Henry. Integrating User Needs in Environmental Design. National Technical Information Service, U.S. Department of Commerce, January 1973.
- Sanoff, H., and M. Sawhney. Residential Livability: A Socio-Physical Perspective. Raleigh, N.C.: Urban Affairs and Community services Center, North Carolina State University, 1971.
- Scharf, Stephanie Ann. The Social Psychology of Neighborhood Satisfaction, Unpublished Ph.D. dissertation, University of Chicago, 1978.
- Schmitt, R. C. "Density, Health and Social Organization." Journal of the American Institute of Planners, 1966, 32, 38-40.
- Schneider, H. "The Quality of Life in Large American Cities: Objective and Subjective Social Indicators." Social Indicators Research, 1975, 495-509.
- Schultz, Theodore John. Community Noise Ratings. London: Applied Science Publishers, Ltd., 1972.
- Shoval, Judith. "The Micro-Neighborhood: An Approach to Ecological Patterns of Ethnic Groups." Social Problems, 1962, 9, 272-280.
- Slidell, John B. "The Shape of Things to Come?: An Evaluation of the Neighborhood Unit as an Organizing Scheme for American New Towns." Chapel Hill, North Carolina: Center for Urban and Regional Studies, University of North Carolina, 1972.
- Speare, A., Jr. "Residential Satisfaction as an Intervening Variable in Residential Mobility." Demography, 1974, 11, 173-188.
- Suttles, Gerald D. The Social Order of the Slum. Chicago: University of Chicago Press, 1968.
- Suttles, Gerald D. The Social Construction of Communities. Chicago: University of Chicago Press, 1972.
- Suttles, Gerald D. "Community Design: The Search for Participation in a Metropolitan Society." In Amos Hawley and Vincent Rock (Eds.), Metropolitan American in Contemporary Perspective. New York; Halsted, 1975, 456-502.

- Taub, Richard P., D. Garth Taylor and Jan D. Dunham. "Crime, Fear of Crime, and the Deterioration of Urban Neighborhoods." Chicago: National Opinion Research Center, 1981.
- Taylor, D. Garth. "Housing, Neighborhoods, and Race Relations: Recent Survey Evidence." The Annals, January 1979, 441, 26-40.
- Thurstone, L. The Measurement of Values. Chicago: The University of Chicago Press, 1959.
- Tomeh, Aida K. "Informal Group Participation and Residential Patterns." American Journal of Sociology, 1964, 70, 28-35.
- Troy, Patrick. Environmental Quality in Four Sydney Suburban Areas. Canberra: Urban Research Unit, Australian National University, 1971.
- University of Indiana, Workshop in Political Theory and Policy Analysis. Department of Political Science Research Reports in "Measures of Municipal Services: Multi-Mode Approaches," 1975.
- U.S. Department of Commerce, U.S. Bureau of the Census. Questionnaire for the "Annual Housing Survey." 1976.
- U.S. Department of Commerce, U.S. Bureau of the Census. Annual Housing Survey: 1976, Part A. Washington, D.C.: U.S. Government Printing Office, 1978.
- U.S. Department of Commerce, U.S. Bureau of the Census. Annual Housing Survey: 1977 Detroit, Michigan SMSA. Washington, D.C.: U.S. Government Printing Office, 1980.
- U.S. Department of Housing and Urban Development. The 1973 HUD Survey on the Quality of Community Life: A Data Book. Washington, D.C.: 1978.
- U.S. Department of Health, Education and Welfare. Public Awareness and Concern with Air Pollution in the St. Louis Metropolitan Area. Washington, DC: U.S. Government Printing Office, 1965.
- Warren, Donald I. "The Functional Diversity of Urban Neighborhoods." Urban Affairs Quarterly, December 1977, 13, 151-180.
- Wellman, Barry. "The Community Question: The Intimate Networks of East Yorkers." American Journal of Sociology, March 1979, 84, 1201-1231.
- Wellman, Barry, and Barry Leighton. "Networks, Neighborhoods, and Communities." Urban Affairs Quarterly, March 1979, 14, 363-390.
- Wilmott, Peter. "Housing Density and Town Design in a New Town: A Pilot Study of Stevenage." The Town Planning Review, July 1962, 33, 115-127.
- Wilner, Daniel M., Rosabelle Walkeley, Thomas C. Pinkerton and Matthew Taybeck. The Housing Environment and Family Life. Baltimore: The Johns Hopkins Press, 1962.

- Wilson, Sir Alan. Noise, Final Report of the Committee on the Problem of Noise, Cmnd. 2056. London: Her Majesty's Stationery Office, 1963.
- Wilson, R. L. "Liveability of the City: Attitudes and Urban Development." In F.S. Chapin, Jr., and S. Weiss (Eds.), Urban Growth Dynamics. New York: Wiley and Sons, 1962, 359-399.
- Wirth, L. The Ghetto. Chicago: University of Chicago Press, 1928.
- Wirth, L. "Urbanism as a Way of Life." American Journal of Sociology, 1938, 44, 1-24.
- Wolf, Elinor, and C. Lebeaux. "Newcomers and Oldtimers in Lafayette Park." In Change and Renewal in an Urban Community. New York: Praeger, 1969.
- Wolpert, J. "Migration as an Adjustment to Environmental Stress." Journal of Social Issues, 1966, 22, 92-102.
- Worth, R.M. "Urbanization and Squatter Resettlement as Related to Child Health in Hong Kong." American Journal of Hygiene, 1963, 78, 338-348.
- Young, Michael, and Peter Willmott. Family and Kinship in East London. Middlesex, England: Penguin Books, 1962.
- Zehner, Robert B. "Neighborhood and Community Satisfaction in New Towns and Less Planned Suburbs." Journal of the American Institute of Planners, 1971, 37, 379-385.
- Zehner, Robert B. Indicators of the Quality of Life in New Communities. Cambridge: Ballinger Publishing Company, 1977.
- Zehner, Robert B., and F. Stuart Chapin, Jr. Across the City Line: A White Community in Transition. Lexington, Massachusetts: Lexington Books, 1974.
- Zehner, Robert B., and Robert W. Marans. "Residential Density, Planning Objectives, and Life in Planned Communities." Journal of the American Institute of Planners, 1973, 39, 337-345.
- Zorbaugh, H. The Gold Coast and the Slum. Chicago: The University of Chicago Press, 1929.