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Age Mix, Physical Design, and Fear of Crime Among the Elderly Public Housing Residents

Janice. Normoyle
Loyola University Chicago

AGE MIX, PHYSICAL DESIGN, AND FEAR OF CRIME AMONG ELDERLY PUBLIC HOUSING RESIDENTS

by

Janice Normoyle

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VITA

The author, Janice Normoyle, has been affiliated with the Center for Urban Affairs and Policy Research, Northwestern University since 1978. As research analyst, she authored or co-authored approximately 15 federally- or locally-funded technical and research reports for the National Institute of Justice, Department of Housing and Urban Development, The Police Foundation, the City of Evanston, Illinois, and the City of Wilmette, Illinois. She is currently a faculty affiliate with research in progress on fear of crime among elderly public housing residents.

In 1970, Miss Normoyle received the degree of Bachelor of Arts in history and secondary education from the University of Illinois. Her Master of Arts in social psychology was completed in 1980 at Loyola University of Chicago.

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INTRODUCTION

Statement of the Problem

The need for additional, low-cost public housing for the elderly has emerged on the public agenda of many communities in the last decade (Teaff, Lawton, Nahemow, & Carlson, 1978). The elderly comprise one of the most rapidly growing and financially disadvantaged segments of the American population. The majority reside in central cities and transitional areas where affordable housing may be substandard or difficult to locate. However, Mathieu (1976) and others (Birren, 1969; Rosow, 1961) have suggested that the cost and quality of housing available to the low-income elderly are not necessarily the most important problems that can be ameliorated by the provision of additional public housing.

One of the most salient aspects of housing for the elderly is the risk to their personal safety and property (Lawton, 1975). For a number of years, crime has ranked consistently high among the elderly's concerns. Crime rates against elderly persons are not higher nor the physical and economic consequences of crime victimization more severe than for the general population (Cook, 1976; Cook & Cook, 1976; Cook, Skogan, Cook, & Antunes, 1978; Cook, Fremming, & Tyler, 1981). Nevertheless, the elderly's fear of crime exceeds that of other age groups (Adams & Smith, 1976; Skogan & Maxfield, 1981). The high level of the elderly's anxiety has prompted a concern among

gerontologists, urban planners, and others with discovering factors in the public housing setting which might lessen their crime-related experiences and fear.

Two types of factor have been proposed as explanations of fear in public housing. Newman's (1972, 1973; Newman & Franck, 1982) theory of defensible space argues that public housing residents' feelings of security are determined by the architectural design and layout of the housing stock. An alternative explanation suggested by Lawton (1975, 1976a; Lawton & Yaffe, 1980) and others (Gubrium, 1974; Newman, 1972; Teaff et al., 1978; Van Buren, 1976), and considered by Van Buren (1976) to be an embodiment of the defensible space concept, focuses specifically on the concerns of elderly residents and links their crime-related experiences to the age mix of public housing residents. Past research has examined each factor independent of the other, and each explanation has received limited support. The purpose of this study was to examine the relationship between age mix in public housing and elderly residents' fear of crime and compare the merits of the age mix explanation against the explanation of fear proposed in defensible space theory.

The Introduction has been organized into three major sections and is followed by a section which summarizes the hypotheses examined in this study. The first section presents a discussion of (a) age mix and defensible space theories and the predictions each makes about fear of crime among elderly public housing residents, (b) the merits of the available findings, and (c) the issues which these findings raise about optimal environments for the elderly. Particular

attention is directed to the controversy regarding whether elderly residents should be segregated from younger public housing residents as a strategy for reducing their fear of crime. Age segregation is discussed in greater detail in the second section by examining and evaluating the issue within the broad context of previous research of the impact of housing on the elderly's well-being. The third section presents a discussion of how the age mix of public housing residents might influence the elderly's fear of crime. In particular, age mix has been proposed as a determinant of the crime environment, social integration, social order, and predictability of the public housing site. These four explanations and the available evidence are reviewed.

Fear of Crime and Public Housing--Two Theories

The proposed link between the age mix of public housing residents and crime-related experiences stems from the view that age mix produces some local housing environments which are more "protective" of older people than are others (Gubrium, 1972, 1974; Lawton & Yaffe, 1980). The source of the elderly's problem with crime has been attributed to the tendency for troubled families to locate in low-income public housing. The roots of the age-mix hypothesis lie in the observation that "older people and the teen-aged children of problem families constitute a lethal mix" (Lawton, 1976a, p. 178). Moreover, by mixing a small number of elderly randomly among families (e.g., age-integrated housing), even "younger children from such families are frequently a source of stress, although more for their nuisance value than for serious criminal behavior" (p. 178).

As a consequence, the elderly's feelings of security are thought to be heightened when the age-homogeneity of public housing is increased.

Age-homogeneous settings may include those in which the proportion of elderly residents is high (e.g., age-dense housing), the elderly reside in close proximity to one another regardless of number (e.g., age-clustered housing), or the elderly are removed to a residential environment without younger people (e.g., age-segregated housing). For example, sites in which elderly residents comprise perhaps 25% to 40% of the housing population would be considered age-dense when compared with what would be expected based on their representation of less than 15% in the general population. Clustering is present when elderly persons and families are housed on separate floors of a building or in different buildings within a site. An all-elderly site that is separate from, but possibly adjacent to, a site housing families typifies what has been labelled as "age-segregated housing."

An examination of the age-mix perspective was conducted by Lawton and Yaffe (1980) among 662 elderly living in 53 housing sites located across the country. Sites were classified along a proposed continuum of age-homogeneity. The lowest value of "1" was assigned to sites in which housing for the aged and families are mixed in a random arrangement and the highest value of "6" to sites which house only elderly and are not contiguous to a public housing project for families. The remaining sites were ordered so that the clustering of elderly and families on different floors of a building was assigned a lower value (code "2") than was an arrangement in which elderly and

families reside in different buildings within the project (code "4"). An all-elderly site adjacent to other public housing was also distinguished from those which do not abut family sites and was coded "5." Finally, sites which qualified for more than one of the above codes were considered "mixed" and assigned a value of "3." More than 40% of the sample were respondents residing in all-elderly housing that did not abut a family project. As predicted, fear of crime was greater the less age-homogeneous the project population mix.

The concept of defensible space, on the other hand, is based on the premise that certain architectural layouts and "building types were having disastrous effects on their occupants" (Newman, 1972, xiii), especially within low-income urban and public housing communities. In particular, the theory states that the "physical form of the urban environment is possibly the most cogent ally the criminal has in his victimization of society" (Newman, 1972, p. 2) and also affects the behavior and attitudes of urban residents in regulating their own safety and sense of security. The most fearsome and dangerous of environments are hypothesized to be the high-rise structure and the large housing project.

Support for the proposed influence of physical design elements on reactions to crime was found in a study conducted by Newman and Franck (1982). In a sample of 2,655 residents in 63 primarily middle-income housing sites in Newark, San Francisco, and St. Louis, residents of high-rise buildings reported being more fearful of crime than did those living in walk-ups or row houses. The relationship of project size and fear was not analyzed.

While the evidence regarding age mix and physical design is generally promising, certain methodological considerations limit the utility of findings as they inform public housing policies regarding the elderly. For example, the age-homogeneity measure utilized by Lawton and Yaffe confounds density with the spatial distribution of elderly relative to younger people. When elderly and families are housed in the same site (codes 1 through 4 under Lawton and Yaffe's conceptualization of age-homogeneity), density and segregation through clustering can, at least theoretically, represent distinct strategies for increasing age-homogeneity. The number of elderly can be increased whether or not their housing is clustered. Similarly, some form of clustering can occur when the elderly represent 5% or 40% of the site's population. While each approach more or less limits contact with nonelderly, the assumptions about age-homogeneity which underlie each strategy differ markedly.

The endorsement of an increased density of elderly rests on the premise that the basis of the elderly's well-being and sense of security lies in the presence of a sufficient number of other elderly with whom to share the commonalities of status, experience, life style, and beliefs (Rosow, 1967). Although clustered or segregated arrangements appear to differ only in name from age-dense settings, the operating consideration which guides these approaches involves the separation of elderly from the immediate residential environments of younger people. The distinction between density and segregation is one which has serious theoretical and practical import for developing optimal environments for low-income elderly.

The notion of segregating elderly has a long history embedded in controversy. Shanas et al. observed in 1968, for example, that the

> basic preoccupation of social gerontology as it emerged within the last two decades may be categorized as being concerned with integration versus segregation. . . . This is perhaps not only the most important theoretical question in social gerontology today but also the key question affecting all social policies concerning the aged. (p. 3)

Evidence of the costs and benefits associated with segregation "could make a very great difference in how governments interpret the needs of old people and go about meeting them" (Shanas et al., 1968, p. 3).

Advocates of age-integration have criticized segregated settings as being, at the very least, "unnatural and stultifying" environments (Bultena & Wood, 1969) and at their worst, "undemocratic, invidious, and demoralizing" (Rosow, 1961). The preference for residential environments which mix people of various ages is based on the assumption that contact with younger residents increases the elderly's morale by increasing social and psychological stimulation. Benefits are thought to accrue to younger people as well with the elderly serving as role models and examples out of which a positive conception of old age is formed. As a consequence, mutual support between the generations is hypothesized to develop (Blau, 1973; Mumford, 1950; Robbins, 1955; Rosow, 1961).

While acknowledging that "age-segregation may limit the richness of life for both young and old" (Lawton, 1976a, p. 180), Lawton and others consider the assumption that integration promotes positive interaction between the generations as tenuous. Evidence that

cross-generational friendships are infrequent (Nahemow & Lawton, 1975; Rosow, 1967) suggests that the elderly may be left alienated from the community life of younger residents. In low-income sites, moreover, younger residents are hypothesized to be a source of problems for the elderly rather than a source of support. Thus, segregation from younger residents is preferred as a strategy for housing elderly (Lawton, 1976a).

The findings as presented by Lawton and Yaffe (1980), however, provide little empirical justification either for the conceptualization of age-homogeneity as a single dimension or for the attribution of beneficial outcomes to segregation evident in their conclusion that "the strength of fear in age-integrated housing would seem to militate against the planning for further age-integrated housing" (p. 778). Because density and clustering/segregation were not independently assessed, it is unclear, in fact, whether fear is influenced by the extent to which other elderly are present, the separation from nonelderly, or both.

Similarly, because evidence for the defensible space concept is based predominantly on the investigation of middle-income housing developments, it is not known to what extent generalization of findings to low-income public housing is appropriate. In addition, the relationship between design elements and the crime-related experiences of elderly residents was not specifically examined.

Available findings also do not permit an assessment of the relative merits of the age mix and design approaches to the problem of elderly public housing residents' crime-related experiences. Never-

theless, at least implicitly, the assumption of both theories is that age mix is the overriding consideration and, moreover, has a moderating effect on the relationship between physical design and elderly public housing residents' fear. Newman (1972), in particular, suggests that the relative importance of design in determining the elderly's crime-related experiences is dependent on the age context of the public housing site. This conclusion is based on his observation that:

> Interestingly, for low-income elderly, the high-rise apartment building seems to work very well indeed. Their success has been demonstrated in many different cities, including instances where they have been located in high-crime areas. . . . The governing condition, however, is that the building be exclusively for their use: no families with children should be permitted to share the same building. (p. 194)

However, the proposed interaction of building height and age mix and the relative importance attributed to age mix and, in particular, segregation (or clustering) have not been tested in previous research.

The first issue considered in this study, then, was to compare these explanations of public housing elderly's fear of crime to determine, in particular, the nature of age-mix effects. In examining fear of crime among elderly public housing residents, this study extends previous research on the age-mix issue in a number of ways. First, density and segregation were independently assessed among a sample of elderly public housing residents, approximately 80% of whom reside in sites which also house nonelderly. Second, the merits of age context relative to other explanations of public housing elderly's fear were assessed. In particular, the size of age mix effects were compared to factors proposed by Newman (1972) in the "defensi-

ble space" concept of crime and fear in public housing. Finally, the hypothesis that the effect of physical design is contingent, in part, on the age context of public housing sites was evaluated.

Age Context: Origins of the Confusion Between Density and Segregation

The failure to differentiate between the density and segregation of elderly apparent in Lawton and Yaffe's (1980) study of fear seems to have resulted as an unintended outcome of prior research of the age-homogeneous setting. Carp (1976) attributes the source of the problem to inappropriate generalization beyond the findings from early studies of age-segregated housing (Aldridge, 1959; Carp, 1966a, 1966b, 1975a, 1975b; Lawton, 1976b; Lawton & Cohen, 1974; Sherman, Mangum, Dodds, Walkley, & Wilner, 1968; Sherwood, Greer, Morris, & Sherwood, 1972) and comparisons of the merits of settings differing in the density of elderly residents (Rosenberg, 1970; Rosow, 1967).

Two studies in particular have had far-reaching influence on recent conceptualizations of the age-mix issue and, in particular, segregation of the elderly. The first study involved an assessment of Victoria Plaza, an age-segregated, low-income high-rise in San Antonio. The second study was Rosow's (1967) examination of the relationship between the density of elderly residents in neighborhood apartment buildings and the elderly's friendship patterns.

Carp (1966a, 1975a, 1975b) conducted a longitudinal evaluation of 240 successful and 146 unsuccessful applicants for apartments in Victoria Plaza. Although there were few differences between the samples prior to the time the selection decision was made, the self-reported quality-of-life improved among the rehoused. Self-concept,

morale, self-reported health, activity participation, and satisfaction with day-to-day aspects of the housing increased during the first year of residence in Victoria Plaza, while remaining unchanged or declining among those not selected for an apartment. Similar differences were maintained after 8 years (Carp, 1975a, 1975b). The accumulated evidence from studies such as these led Carp (1976) to conclude that age-segregated living situations can provide "satisfactory milieux for aging" (p. 259).

In a study conducted in the Cleveland metropolitan area, Rosow (1967) investigated the effect of age density in neighborhood apartment buildings on friendship patterns among neighbors. He hypothesized that, for the elderly, "there will be more friendships and interaction where there are more old residents and less where there are fewer" (p. 39). Moreover, "this should be true under all conditions and increase with local dependency" (p. 39). Apartment buildings were categorized as having a normal density of elderly (1% to 15%), concentrated (33% to 49%), or dense (50% or more). While the sample of approximately 1,200 elderly was predominantly middle-class, residents from a working-class background and residing in either of two public housing projects were also included. One of the projects was classified as being of normal density, the other as dense.

In general, Rosow found that number of local friends varied directly with the age-density of apartment buildings in which the elderly resided. The effect was more pronounced for working-class elderly who were more dependent on neighbors for friendship than were middle-class elderly. Rosenberg's (1970) study of middle-aged and

older working-class residents in Philadelphia and their level of contact with neighbors living on the same city block yielded similar results. Contact increased with the number of age-peers available, especially among those who were less well-off financially.

Carp (1976) suggests that:

> Early evidence of the satisfactory experience with housing for the elderly coincided in time with Rosow's evidence pointing to the socialization benefits of a residential environment with a rich supply of age-peers. This coincidence may have influenced thinking toward the view that total age segregation in housing is ideal for older people. (p. 258)

Carp acknowledges, for example, that the study of Victoria Plaza, which is properly viewed as an examination of rehousing, contributed to the problem. No data on the effects of integration versus segregation were collected. Yet, the impact of Victoria Plaza on rehoused community residents is often cited in support of segregating elderly, a conclusion Carp considers as highly questionnable and unwarranted based on any data which were reported.

It is likely that a "radical extrapolation from Rosow's work" (Carp, 1976, p. 258) and studies like that of Victoria Plaza influenced, in part, the subsequent conceptualization and measurement of age-homogeneity developed by Lawton and his associates. To compare the merits of settings differing in the proximity of elderly to non-elderly, for example, Teaff et al. (1978) examined the effect of age context in the public housing setting on the general well-being of elderly residents. Interviews were completed with approximately 2,000 elderly tenants from 102 projects located around the country. The sites were classified along a 6-point continuum, ranging from a

random arrangement, with the aged and families mixed indiscriminantly, to total segregation, in which the site houses only elderly and does not abut a family project. The measure utilized to assess age-homogeneity, then, was that used by Lawton and Yaffe (1980). In addition to age mix, other contextual factors were assessed and included suprapersonal variables (e.g., percentage of nonwhite persons in the site) and physical environment variables (e.g., height of predominant buildings and total number of dwelling units). Well-being was measured utilizing multiple indicators and included on-site activity participation, contact with family, morale, satisfaction with housing, motility, and friendship patterns. Demographic data were also collected.

Two issues were considered. The first involved whether age context impacts on the elderly's well-being independent of other possible causal factors. To examine this question, the effects of demographic variables, factors related to the physical environment, and suprapersonal factors were controlled. While the size of the effect was quite small, age context accounted for significant variance in four of the six measures of well-being over and above that accounted for by individual differences, the suprapersonal context, and the physical environment.

The second issue involved the nature of that effect. As expected, the more age-homogeneous the project population, the greater the on-site activity participation, the higher the morale, the greater the satisfaction with housing, and the greater the neighborhood motility of elderly public housing residents, all else being equal.

Although the bivariate relationship was positive and significant, age mix was not associated with on-site involvement with friends when the influence of other factors was equated. Age context was not linked to family contact either at the bivariate or multivariate level of analysis.

The age-homogeneity continuum utilized by Teaff et al. (1978) and, of course, in the later work of Lawton and Yaffe (1980) on fear, appears to classify housing according to the degree of segregation between elderly and nonelderly residents. In fact, however, density and segregation appear to be confounded to some extent. Without the effects of density controlled, it is unclear how or if segregation relates to the various indices of well-being, including feelings of personal safety.

It should be noted that the concern with the age mix of community residents as it impacts on the well-being of the elderly originally developed out of a view of aging as a progression of losses. Three aspects of social-psychological loss have been emphasized in particular (Shanas et al., 1968). One perspective focuses on the declining role differentiation and role expectations of elderly in western societies (Cavan, Burgess, Havighurst, & Goldhamer, 1949; Havighurst, 1968; Havighurst & Albrecht, 1953; Knapp, 1977; Lemon, Bengston, & Peterson, 1972; Maddox & Eisdorfer, 1962; Neugarten & Hagestad, 1976; Neugarten & Moore, 1968; Rosow, 1976; Streib, 1976). Few new and meaningful social roles are available to replace the loss of status, responsibilities, and rights that accompanies the empty nest, widowhood, retirement, and the like. The disengagement per-

spective suggests that, in addition to changes in social roles and status, the elderly psychologically withdraw from social involvement as a normal component of aging (Crawford, 1971; Cumming, 1963; Cumming, Dean, Newell, & McCaffrey, 1969; Cumming & Henry, 1961; Havighurst, Neugarten, & Tobin, 1968; Kalish & Knudson, 1976). Alienation from the young, attributed to the disintegration of extended family units, has been identified as the third type of social-psychological loss (Shanas et al., 1968).

For whatever the reason, as their life space and social resources shrink, the immediate residential environment assumes an importance among elderly not as evident in the mobile young (Birren, 1969; Campbell, Converse, & Rodgers, 1976; Carp, 1976; Kahana, Liang, & Felton, 1980; Lawton, 1970a, 1970b, 1975; Lawton, Nahemow, & Teaff, 1975; Lawton & Simon, 1968; Mathieu, 1976; Rosow, 1961; Schooler, 1969). In neighborhoods where the number of available elderly tends to be slim and when finances or health preclude travel, the low-income elderly may experience serious difficulty in establishing and maintaining meaningful ties within the community. The positive impact of age-homogeneity on the well-being of elderly residents has been demonstrated in both conventional urban neighborhoods and low-income public housing (Berghorn, Schafer, Steere, & Wiseman, 1978; Bultena & Wood, 1969; Carp, 1975c; Felton, Hinrichsen, & Tsemberis, 1981; Hamovitch & Peterson, 1969; Kahana, Liang, Felton, Fairchild, & Harel, 1977; Lawton et al., 1978; Messer, 1967; Rosenberg, 1970; Rosow, 1967; Teaff et al., 1978). Until the role of density is distinguished from segregation in producing outcomes, however,

it will not be known whether or to what extent each strategy for increasing age-homogeneity can be utilized to augment or compensate for the other in ameliorating the social and psychological losses associated with aging.

Age Mix and Fear of Crime in Public Housing

The second concern of this study is to examine how age mix in public housing might influence the elderly's crime-related experiences. With few exceptions, prior research has not investigated factors which mediate the relationship between age mix and the elderly's fear of crime. Theoretical development of this issue has also been somewhat limited.

Van Buren (1976) and Newman (1972) have proposed two explanations of the effects of age mix. The first links the age context of public housing to the incidence of on-site criminal activity and victimization, the second to the emergence of a social environment that promotes feelings of safety.

The on-site crime problem. Recent victims of crime, those who personally know of others who are recent victims, or those living in areas with serious crime problems are more fearful of crime than are those without similar experiences (Lavrakas et al., 1980; Lawton & Yaffe, 1980; Skogan, 1977a; Skogan & Maxfield, 1981; Tyler, 1980). The proposed relationship between the crime problem and variations in the age mix of public housing is based on the accurate assumption that adolescent and young adult males are responsible for the majority of property and personal crimes. By housing the elderly in age-dense, age-clustered, or age-segregated settings, it is suggested

that potential criminals are deterred because they are more readily identified as outsiders and, as such, easily detected (Gubrium, 1974; Newman, 1972; Van Buren, 1976). The incidence of on-site crime, then, and the likelihood that residents have been victimized while on-site are expected to be higher in sites in which the elderly population is of low density or elderly are housed randomly among nonelderly.

The available evidence regarding the crime problem explanation of age mix effects is limited to the examination of reported victimizations. The results were inconsistent. In an exploratory examination of the issue, Sherman, Newman, and Nelson (1976) found that a greater number of elderly living in an Albany-Troy, New York age-integrated site reported having been a victim of crime since moving to public housing than did those residing in either the clustered or segregated housing project. However, in systematic sampling from projects around the country, Lawton and Yaffe (1980) found no support for the hypothesis that criminal victimization, reported for the preceding 3 years, was linked to age-homogeneity in public housing. Unfortunately, off-site experiences of elderly residents were not differentiated from those occurring on-site. Since off-site experiences have no clear theoretical status in the age mix model, an appropriate test of the relationship between age context and the crime and victimization problems in public housing has not been undertaken.

Clearly, a number of hypotheses may be derived from the explanation of age mix effects which focuses on the crime environment.

The characteristics of the social environment that would be expected to result from age-homogeneous settings and, in turn, enhance feelings of safety among elderly residents have not been clearly specified. However, a number of social outcomes of age-homogeneity have been proposed in housing theory focusing on more general aspects of the elderly's well-being, morale, and satisfaction.

Age-homogeneity has been proposed as a determinant of social integration (Birren, 1969; Blau, 1973; Bultena & Wood, 1969; Carp, 1966a, 1976; Gubrium, 1974; Lawton, 1975; Mathieu, 1976; Rosow, 1961, 1967; White House Conference on Aging, 1971), the social order in public housing (Lawton, 1975; Messer, 1967; Moos, 1980; Sherman et al., 1968; Teaff et al., 1978), predictability (Blau, 1973; Carp, 1966a, 1976; Gubrium, 1972; Lawton, 1975), and finally, role transition and group identity formation (Blau, 1973; Bultena & Wood, 1969; Eisenstadt, 1956; Felton et al., 1981; Longino, McClelland, & Peterson, 1980; Messer, 1967; Rose, 1965; Rosow, 1961, 1967, 1974; Sequin, 1973). Each of these factors but the last has been proposed as an important determinant of the elderly's and other's reactions to crime (Biderman, Johnson, McIntyre, & Weir, 1967; Hunter, 1978; Normoyle & Lavrakas, in press; Skogan & Maxfield, 1981).

Social integration. Social integration refers to the cohesiveness among residents in a community (Skogan & Maxfield, 1981). A psychological-affective component of social integration is reflected in residents' expressions of attachment, identification, and other positive sentiments and evaluations toward the community (Hunter, 1974; Wirth, 1938). Visiting among neighbors, helping each other

out, and other activities of typical "neighboring" represent its social or behavioral aspects (Keller, 1968).

There are a number of bases on which social integration has been viewed as an important antecedent of residents' reactions to the crime problem. Janowitz (1978), for example, hypothesized that the degree of cohesiveness in a community influences residents' capacity to regulate activity and maintain order, thereby ensuring their safety and welfare. However, even in areas where disorder and crime are serious problems, being socially integrated may lessen fear by familiarizing residents with the "rhythms of life around them" (Skogan & Maxfield, 1981, p. 99) and thus producing a basis on which to more effectively manage risks (Suttles, 1968). Similarly, Skogan and Maxfield (1981) have suggested that socially integrated residents may be more involved in the neighborhood communication network. Although such involvement may increase concern and uneasiness about crime by increasing exposure to information about conditions and others' victimization, the sense of social isolation, perceived vulnerability, and hence, fear may be reduced overall through linkages to sympathetic and supportive others (Gubrium, 1974; Skogan & Maxfield, 1981).

The relationship between social integration and fear was assessed in a study of residents from Chicago, Philadelphia, and San Francisco reported by Skogan and Maxfield (1981). As hypothesized, those who were more integrated into their communities were also somewhat less fearful of crime than were those with fewer ties to neighbors (see also confirmatory findings in examination of urban elderly

reported by Jaycox, 1978). In general, the elderly were typically "somewhat estranged from the local social system" (p. 102); they were acquainted with few neighborhood youths and felt less certain about their ability to distinguish strangers from those who belong in an area.

Just as social integration characterized some people more than others, an examination of 10 neighborhoods within the three cities indicated that social integration was more characteristic of some areas than others. Neighborhood differences were attributed to two factors. Local ties were significantly stronger in neighborhoods in which residents were invested in the area through home ownership and long-term residency with plans to remain for some time in the future. A second determinant involved the racial make-up of the area; socially-integrated neighborhoods tended to be traditionally all-black or all-white rather than areas in transition. As a consequence, residents of socially-integrated communities tended to have important commonalities expressed both in terms of shared commitment to an area and experiences reflected along other dimensions such as racial or ethnic background. These findings suggested that homogeneity is an important basis for strengthening residents' local ties and, thus, their feelings of safety.

The proposed relationship between age mix and social integration in public housing rests on the assumption that age provides a base of commonality among elderly residents on which to increase their attachment and identification with the local social system. Although Teaff et al. (1978) found no evidence for the hypothesis that age-

homogeneity influences involvement with friends, aspects of social integration other than typical neighboring, such as perceived cohesiveness, have not been tested in previous research.

Social order. Despite the fact that few actually witness or otherwise experience criminal activity firsthand, most people nevertheless develop relatively accurate assessments about how problematic crime is in their neighborhoods (Skogan & Maxfield, 1981). One source of residents' understanding of the crime situation results from the indirect signs or cues available in the local social order (Biderman et al., 1967; Hunter, 1978; Stinchcombe et al., 1978; Wilson, 1968).

The signs of an unstable or troubled neighborhood are often indicated by the presence of activity that is not necessarily illegal but violates usual norms and standards of conduct. Where standards "seem to be in a decline, people feel that they are watching the disintegration of the rules that ought to govern public life" (Skogan & Maxfield, 1981, p. 91). Public intoxication or loitering teenagers who harass passers-by, for example, become a symbolic gauge of deep-rooted problems and "serve as early-warning signals of impending danger because people have learned to associate them with things they fear" (Skogan & Maxfield, 1981, p. 92). Thus, these "signs of disorder" or "incivilities" have been linked to fear because "people take their cues from the neighborhood about how afraid to be" (Furstenberg, 1971, p. 607).

Support for this "incivility" explanation was found in the three-city study reported by Skogan and Maxfield (1981). Not only

were perceptions of disorder related to judgments of the severity of the neighborhood crime problem, but as expected, to fear as well. Fear of crime was greater among residents who reported serious disorder in the community.

The expectation that disorder would be less likely to occur in age-homogeneous settings is based on the idea that adolescents and young adults are responsible for most disruptive activity. The source of their actions is attributed to the failure of disorganized and troubled families found in public housing to monitor and regulate the behavior of their own members (Newman, 1972). Thus, intimidation of weaker community residents, substance abuse, noise, gang-related activities, vandalism, and the like are allowed to develop unchecked.

In settings with an age context that favors older residents, behavior compatible with the elderly's norms and standards, rather than those of youths and others from troubled families, is hypothesized to predominate (Gubrium, 1972). Thus, "the activity that is expected of persons, sanctioned, or labeled as deviant, is significantly different from that in age-heterogeneous locales" (Gubrium, 1972, p. 282). However, previous researchers have not examined whether, in fact, the problem of perceived disorder and the perceived source of crime- and disorder-related problems as "insiders" are linked to the age context in public housing.

Predictability. The concept of predictability has been emphasized in recent explanations of the elderly's fear (Normoyle & Lavrakas, in press). This explanation is based on the prevalent

belief among the public that crime occurs at random, especially when it involves personal violence. Thus, walking alone in the neighborhood at night or encountering a stranger may be fear-provoking because the outcome of these situations can be unpredictable. In encountering strangers, for example, "we do not understand their motives and thus cannot forecast what they may do" (Skogan & Maxfield, 1981, p. 50). Because of the elderly's physical vulnerability and difficulty in resisting criminal predation, there may seem to be little that can be done about what happens (Skogan & Maxfield, 1981; Stinchcombe et al., 1978). As a consequence, then, the severity of the elderly's fear is thought to reflect a reaction to the unpredictability they attribute to strangers.

Support for the predictability hypothesis of fear was found in a study of elderly urban women (Normoyle & Lavrakas, in press). The perception of event predictability was significantly related to fear even after any differences in recent victimization experience were controlled. As predicted, elderly urban women who viewed events as unpredictable expressed greater fear.

The proposed relationship between predictability and the age mix of public housing stems from the observation that the range and types of situations likely to be encountered differs with variations in the age context of residents. Specifically, in

> highly heterogeneous environments, the variety of situations that persons are likely to encounter are maximal. This implies that any person must have a sufficient command of himself to "make-out," . . . from one situation to the next. The resources he possesses, then, must be sufficiently endowed so as to allow him to fulfill a variety of expectations. Now, what of homogeneous environments? The variety of situations with which persons

> are confronted here are quite narrow . . . Facility in one situation is likely to mean facility in most. (Gubrium, 1972, p. 282)

Thus, various age contexts place differential burdens on the elderly in knowing what to expect in the setting.

An important fear-related aspect of predictability or knowing what to expect is reflected in the confidence residents have in distinguishing people who belong in the site from those who do not (and are thus potential threats). Van Buren (1976) proposed that one outcome of age-homogeneity is the ability to readily identify outsiders. However, this factor has not been examined in prior studies of age context.

In general, it is hypothesized that effects of public housing's age mix on elderly residents' reactions to crime are mediated by the crime and social environments the housing is proposed to create. However, similar outcomes in public housing have been attributed as well to physical design elements within defensible space theory (Newman, 1972).

Specifically, defensible space theory states that "perceived zones of influence" are created, the capacity for informal surveillance maximized, and a positive housing image and milieu shaped, in part, by a reduction of housing-project size and the limitation of building height. The mechanisms of defined zones, surveillance, and image are assumed to make evident that "an area is the shared extension of the private realms" of residents who have unquestioned control over and responsibility for setting "the norms of behavior and the nature of activity possible" (p. 2), allow residents to learn to

"distinguish neighbor from intruder" (p. 18), and bring residents together in a "sense of community" (p. 3). According to this theory, physical design is the foundation on which a social environment can emerge in which residents participate in the production of their own safety and that of their neighbors. The potential criminal is deterred by the perception of an environment which is "controlled by its residents, leaving him an intruder easily recognized and dealt with" (p. 3). Consequently, fear may be inhibited "by creating the physical expression of a social fabric that defends itself" (p. 3).

This study further extends previous research by examining the four explanations of age-mix effects on the fear of crime among elderly public housing residents. The four explanations involve three crime-relevant social environment factors--social integration, social order (or disorder), and predictability--as well as factors related to the crime environment. The relationship between density and segregation and each of these types of factor are evaluated against the explanation of effects due to physical design factors derived from defensible space theory.

Summary and Hypotheses

In summary, several predictions are made about the relative merits and nature of the relationship between resident age mix in public housing and the elderly's fear of crime.

First, it is predicted that the age context of residents, defined both in terms of density and segregation of elderly, and the physical design of public housing are associated with elderly residents' fear of crime. Fear of crime is expected to be greater among

elderly residing in low age-dense sites, high-rise buildings, and large public housing projects. Opposite predictions have been made about the effect of segregation. Advocates of age-integration predict that segregation results in negative or "demoralizing" outcomes, such as higher fear. Lawton (1975, 1976a), on the other hand, hypothesizes that fear of crime is higher among elderly residents of age-integrated sites.

The main effect of age mix on fear is expected to be greater than the effect of physical design over all levels of age context. Thus, density and segregation are predicted to be of greater utility in explaining fear of crime than are building height and project size.

In addition, the effect of physical design is also expected to be contingent, in part, on the age context of the site. Thus, significant interactions between density or segregation and building height are predicted. According to Newman (1972), fear of crime is expected to be lower among elderly who reside in high-rise buildings in age-segregated or age-dense projects.

Second, it is predicted that the age context of public housing is associated with the crime environment of elderly residents, the social integration of elderly residents, the social order within the site, and predictability. Age-homogeneity is expected to be inversely related to the extent to which crime is a problem in the site and elderly residents perceive their neighbors' activities as a problem. Conversely, age-homogeneity is predicted to be positively related to the extent to which elderly public housing residents are confident of their ability to distinguish residents from outsiders

and perceive project residents to be socially integrated into their sites.

Specifically, it is predicted that the probability of having been victimized, the perceived severity of the crime problem, the tendency to perceive the crime problem as having worsened, the perceived severity of disorder, and the tendency to attribute crime and disorder problems to other residents will be lower among elderly residents of high age-dense and/or segregated settings. Similarly, cohesiveness among residents, relying on neighbors to watch the home when residents plan to be away, and the ease with which strangers are recognized are expected to be greater in age-homogeneous settings.

No prediction can be made about the direction of the effect of age-homogeneity on the likelihood of knowing other local victims (and thus, being indirectly or vicariously victimized). On the one hand, the prediction of fewer victimizations in an age-homogeneous setting suggests that indirect victimization will also be less likely since there are fewer victims. However, if interaction among residents is higher or the setting more cohesive, information about victimization may be widely disseminated and increase its indirect effect on nonvictims. Furthermore, based on the findings of Teaff et al. (1978), neither density nor segregation is expected to be related to the extent to which residents interact with each other, though this typical neighboring behavior is prevalently cited as an outcome of age-homogeneity and has been linked to fear.

The effects of age mix are expected to be independent of any

effects that might be attributed to physical design as a source of the existing crime and social environments in public housing. In addition, the possible interaction of physical design and age context in producing their effects will be examined.

To test these predictions, a reanalysis was performed of data from the Citizens' Attitude and Victimization Survey, conducted by The Police Foundation for the Urban Initiatives Anti-Crime Program, Department of Housing and Urban Development.

METHODOLOGY

Overview

The Citizens' Attitude and Victimization Survey was undertaken to assess public housing residents' crime problems and community needs related to developing anticrime programs and providing a base line against which anticrime efforts could be evaluated. The survey was conducted by The Police Foundation during the summer of 1981 in 42 public housing sites and selected contiguous neighborhoods located in 15 cities across the country.

The development of the survey was guided by the two objectives of determining (a) reliable estimates of victimization and (b) reliable indices of resident attitudes, concerns, and perceptions. Accommodating both goals required the construction of a long and short version of the questionnaire to obtain adequate victimization data while not increasing sample size for attitudinal data beyond reasonable proportions. While the short version (Citizens' Victimization Survey) was developed to screen for victimization, subsets of attitudinal items were reproduced from the long version of the instrument. In addition to the information provided by respondents, contextual data describing site characteristics were recorded by interviewers or furnished by site administrators.

A randomly selected sample of households within each site was eligible to receive the survey. Eligible household residents were

those 16 years of age or older. In households with one qualifying resident, the long survey version was administered. Where more than one qualifying person resided in the household, a mix of long and short forms was used to interview both, or where there were three or more eligible respondents, two randomly selected household members. Interviewing proceeded in-person at each site; a household response rate of 77% was obtained.

A total of 8,440 neighborhood and public housing residents were interviewed. For the purposes of this study, the sample of interest was composed of the 945 public housing residents who were 60 years old or older.

(A copy of the Citizens' Attitude and Victimization Survey is presented in Appendix A, the short version Citizens' Victimization Survey in Appendix B, and a list of cities and public housing project sites in Appendix C.)

Measures

The dependent variables considered in this study were fear of crime, the perceived crime problem in the site and respondents' victimization experiences, perceived disorder, social integration, and predictability. Four types of independent variable were assessed: age mix, design elements, age mix-by-physical design interactions, and background factors.

Dependent Variables

Fear of crime. Four items were utilized to measure fear of crime. To provide a broad assessment of their fear at the public housing site, respondents were asked, "In general, how safe do you feel

here? Would you say you feel very safe, safe, unsafe, or very unsafe?" To assess their anxiety about being victimized, respondents were asked whether they were very worried, somewhat worried, or not worried at all that certain types of personal and property crime would happen to them at the housing site. The two violent/predatory crimes involved situations in which "someone will try to harm you" and "someone will take something from you," while the item concerned with property crime asked about someone trying to break into the home. Approximately 20% of the respondents felt unsafe or very unsafe overall in the public housing site. Between 40% to 50% of all respondents were worried to some extent, with 13% to 21% reportedly very worried, about being victimized in a violent, predatory, or property crime. These items were found to be highly related (mean $\underline{r}$ = .57). The four item responses were standardized and combined to form an index of fear having a coefficient alpha of .85 (Cronbach, 1951).

The on-site crime problem. Four indicators of the on-site crime problem were assessed. Included were perceptions of the severity of serious crime,[1] the perceived trend in the crime problem, self-reported recent victimization while on-site, and indirect or vicarious victimization through personal knowledge of others who have been victimized while on-site.

To assess the local crime environment, all respondents were asked the extent to which crime in general represented a problem in the public housing site. Approximately 80% judged crime as a problem, with almost half (45%) describing it as a big or very big problem. Those who completed the long version of the survey were also asked to

judge the severity of specific personal and property crimes. Of the four serious crimes considered, assault, robbery, and burglary were each cited as a big problem by approximately 20% and rape or other sexual attacks much less frequently (6%). The five judgments of severity made by long-form respondents were highly interrelated (mean $\underline{r}$ = .48). Item responses were standardized and an index constructed with an alpha coefficient of .83. For the short-form respondents, the index of the crime problem was the one item judgment of crime's severity overall.

To assess perceptions of the recent trend, those who resided at the site for at least 1 year were asked how the crime problem at the time of interview compared with conditions the year before. Approximately half judged the problem to be about the same, 16% perceived the problem as greater, 19% as less, and fewer than 10% each as much greater or much less.

Direct victimization was assessed in a series of questions to determine whether any of the personal or property crimes described occurred within the past year. Overall, 15% of the sample reported having been victimized recently in a property crime and 15% in a personal crime. Follow-up questioning of each reported victimization was undertaken to ascertain whether the incident had taken place on-site or elsewhere. Approximately 10% of the respondents were victimized in a personal crime on public housing premises during the preceding year, including 8% who had received a threatening or obscene telephone call, 1% involved in an attempted or completed pursesnatch or pickpocket, 1% who had been robbed, 1% assaulted or threatened, and 0.1% raped. Sim-

ilarly, over 12% were involved in a property crime victimization while on-site, including the thefts reported by 5%, vandalism by 2%, burglary or attempts by 5%, and automobile or automobile-related thefts and vandalism by 3%. An index of direct victimization was constructed to take into account all multiple on-site victimizations for any one respondent. Approximately 20% of the respondents reported having been victimized in the public housing site at least once in the preceding year in personal and property crime incidents.

Indirect or vicarious victimization was assessed in a series of questions and follow-up items similar to those used to measure personal victimization. Approximately 30% of the respondents reported that they knew one or more public housing residents who had been involved in personal and/or property crime incidents in the previous year.

Perceived disorder. Two indicators of the social order were assessed among long-form respondents only. The first involved perceptions of the extent to which less serious criminal activity and disorderly conditions (e.g., "incivilities") represented a problem in the public housing site; the second was a judgment of the source of on-site criminal activity.

To assess the local social order, long-form respondents were asked in 13 items to rate the severity of various incivilities as a big problem, some problem, or not a problem at all. The disorders most frequently cited as big problems on-site involved groups of teenagers "hanging around and causing trouble" (25%), people who leave trash or garbage about (25%), alcohol or drug use (24% and 22%, re-

spectively), and vandalism (23%). In addition, the sale of drugs was identified as a big problem by 18%, noisy neighbors by 15%, and neighbors who fight by 13%. Approximately 10% or fewer cited nosy neighbors (10%), harassment (9%), people not on a lease who reside in the project (11%), and child abuse (3%). The 13 judgments of severity were highly interrelated (mean r = .46). Item responses were combined to form an index of perceived disorder (alpha = .93). The sample mean was 1.5 (SD = .53), indicating that, in general, disorder was perceived as a slight problem overall.

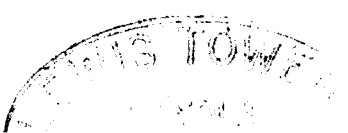
The perceived source of on-site criminal activity was assessed by asking long-form respondents "What kinds of people do you think commit the crimes here?" Approximately 43% attributed on-site crime to "people from outside," 48% to both "insiders" and "outsiders," and fewer than 10% to "people who live here."

Social integration. Three indicators were developed. The first was an assessment of the perceived cohesiveness of project residents. The second involved an index of self-reported, generalized "neighboring" behavior. The third indicator was a measure of "neighboring" typically performed to cope with the crime problem. The latter two indicators were assessed among long-form respondents only.

Respondents' commitment to the housing project community was assessed in the following item:

> Some people feel their neighborhood is a real home to them. Other people think of their neighborhood as just a place where they happen to be living. Which of these comes closest to the way you feel? Do you feel this is a real home or just a place to live?

Perceptions of the level of social integration among site residents



was assessed in a similar item:

> In some neighborhoods, people do things together and help each other. In other neighborhoods, people mostly stick to themselves and go their own way. What about (PROJECT NAME), would you say it's a place where people help each other or go their own way?

Almost three-quarters of all respondents perceived the site as a real home and 60% indicated that residents tend to help each other rather than go their own ways. Item responses were significantly related ($r(857) = .31$, $p < .001$) and combined to form an index of perceived cohesiveness.

To determine respondents' level of "neighboring," typical visiting behavior was assessed in three items included in the longer version of the questionnaire. Respondents were asked the number of times during the previous week they had been in the home of another project resident, neighbors had visited in respondents' homes, and they had otherwise talked with another resident. Respondents reported an average of 1.6 visits in the homes of others ($SD = 2.6$), 2.0 visits by others ($SD = 3.2$), and 6.6 other conversations with residents ($SD = 10.6$). However, it should be noted that 55% visited no one, 46% were visited by no one, and 22% talked with no other resident. The three items were significantly interrelated (mean $r = .32$) and combined to form an index of visiting (alpha = .60).

The third indicator of social integration was assessed in an item which asked if respondents, when going away for a couple of days, had neighbors keep an eye on their homes. Approximately 70% of the long-form respondents reported that they did.

Predictability. One aspect of predictability was assessed.

Respondents were asked, in general, "how easy or difficult is it for you to tell someone who does not live or work here from someone who does?" Approximately 35% thought it difficult and 15% very difficult, while 39% reported the distinction was easy and 11% as very easy.

Table 1 summarizes the dependent variables examined in this study.

Independent Variables

Age mix. Two types of information related to age context were obtained from site administrators. The measure of age density was the percentage of residents who were 62 years old or older. Approximately 38% of the sample resided in sites in which the elderly constituted less than 10% of the project population. The distribution of those who remained was as follows: 28% resided in sites which housed 10% to 25% elderly, 14% in sites which housed 25% to 50% elderly, and 20% in elderly-only projects.

The second factor involved the spatial arrangement of elderly housing relative to family housing. Approximately 59% of the sample occupied housing which was randomly distributed among units assigned to younger families (i.e., an age-integrated arrangement). The remainder resided in housing that was segregated, or removed, from younger families in some way. Included were 8% whose residences were clustered on separate floors of a high-rise or within a block also shared with family units, 12% located in sites within which the elderly and younger families occupied separate buildings or block areas, 18% whose projects were limited to elderly residents but were contiguous to family projects, and 3% from elderly-only projects that did

Table 1

Summary of Dependent Variables

Dependent Variables	Number of Items: Long Form	Number of Items: Short Form	Reliability Coefficient	Total N
Fear of Crime	4	4	.85	945
Direct Victimization	34	34	NA	945
Vicarious Victimization	24	24	NA	945
Perceived Crime Problem	5	1	.83	885
Perceived Crime Trend	1	1	NA	781
Perceived Disorder	13	0	.93	431
Source of Disorder	1	0	NA	349
Cohesiveness	2	2	NA	936
Neighboring: Visiting	3	0	.60	433
Neighboring: Relying on Neighbors	1	0	NA	425
Predictability	1	1	NA	819

not also abut any other public housing. A dichotomous variable was constructed in which any segregated arrangement was scored "1," while an integrated arrangement was assigned "0."

Among sites in which both elderly and nonelderly are housed, the density of elderly is significantly related to whether they are also segregated in some manner. The greater the proportion of elderly in a site, the more likely it is that elderly are housed separately or apart from nonelderly. However, while significant, the relationship is also weak ($r(753) = .14$, $p < .001$). Thus, density and segregation appear to be empirically as well as conceptually distinct strategies for increasing age-homogeneity.

Design elements. Two physical design factors were assessed. Respondent's residency in a high- or low-rise (i.e., row house or walk-up) building was noted at the time of interview; one-third occupied units within a high-rise. In addition, the project population was obtained from site administrators. Approximately 40% of the sample resided in sites with a population of under 1,000 and another 40% in sites with populations of between 1,000 and 2,000. The remainder were located in larger projects.

Age mix-by-physical design interactions. To test the interaction hypotheses, segregation-by-building height and density-by-building height terms (predicted by Newman, 1972) were constructed by taking the product of the component variables.

Background factors. There tends to be systematic variation among those who report being fearful, having been victimized, and the like even within a particular subgroup of the population such as the

elderly. For example, fear of crime tends to be higher among women, Blacks, older respondents, short-term residents, and those who live alone. To account for these sources of variation, a number of demographic and other background variables were assessed through questioning or observation. The sample was 75% female and had a mean age of 71.5 years (SD = 7.7). Race was indicated in a dichotomous variable. A small majority was black (57%). The 32% who were white and 11% hispanic were classified together as other than black. Most lived alone (74%). Approximately 7% had resided in the site less than a year, 18% for 1 to 4 years, 30% for 5 to 9 years, and 45% for 10 years or more.

An analysis of fear was performed according to city of residence (regardless of project or neighborhood of residence within each city) on the entire sample of 8,440 public housing and neighborhood residents who were interviewed. A city contrast variable was constructed and assigned each elderly respondent. Those cities in which residents were significantly higher in fear were coded as "1." Cities in which residents were, on average, significantly lower in fear were coded as "-1." The remaining cities were coded "0."

In addition, because both a long and short form of the survey were administered, the number of items utilized to construct some indices and the number of items presented to respondents varied systematically. Approximately 54% of the sample (510 of 945) responded to the short form version. A dummy variable was created to "capitalize on the information inherent" in having completed one or the other version of the questionnaire (Cohen & Cohen, 1975). Completion of the

long form version of the survey was assigned a code of "1," while a code of "2" was assigned to respondents of the short form version.

(Scale item frequencies and tables of scale item interrelationships are detailed in Appendix D.)

RESULTS

Analyses were performed utilizing hierarchical regression procedures in which sets of variables are entered into the regression equation in stages. The three sets of variables entered successively were, respectively, background factors, the main effect (or additive) components of age mix and physical design, and product terms carrying the interaction (or joint effect components) of age mix and physical design. The main effect components included density, segregation, building height, and project population, while the product terms carried the interactions of segregation and density with building height.

Two considerations guided the use of hierarchical procedures. First, the appropriate test of the interaction must proceed stagewise. Any common variance in fear or other criteria shared by the three sets of variables is assigned to previously entered factors. The product terms used to represent the interactions include, in addition to the joint component, components due to main effects. The main effects must be partialled from the product terms and evaluated first before the interactions are tested. As a consequence, the standardized regression coefficients (betas) for background factors, main effects, and interactions are interpreted at the point each enters the equation.

Second, proceeding stagewise provides a conservative and more stringent estimation of the unique contribution of successive variable sets in explaining the criterion than does simple regression in which

all variables are entered together. In this study, one issue is whether age mix and physical design account for variance beyond that explained by background factors.

If significant main effects are detected, the relative average strengths of physical design and age mix as sources of fear or other criteria were also examined in a usefulness analysis. Hierarchical multivariate procedures were used to assess the utility of physical design factors in accounting for significant criterion variance beyond that explained by both age mix and background factors. A second regression analysis was performed to similarly evaluate age context's contribution to fear or other criteria. (Interaction terms were not considered in these analyses since comparisons of main effects are involved.) Because the joint variance shared by age mix and physical design was assigned to whichever set entered the equation first, the increment in explained variance produced by the remaining set represented a conservative utility estimation on which to base comparisons of relative importance.

Comparing Age Mix and Physical Design Approaches to Fear in Public Housing

The first issue considered in this study was the relationship between age context and physical design factors and elderly public housing residents' fear of crime. Table 2 summarizes the overall linear association between fear, background factors, the set of age mix and physical design factors, and the interactions of age mix and physical design. The increments (I^2) in explained variance and associated F values produced by the successive entry of each set are also

Table 2

Fear of Crime:
Hierarchical Regression Analyses of Criterion Variance Accounted for by Background Factors, Age Context and Physical Design Main Effects, and the Joint Effects of Age Context and Physical Design

Predictor Variable Sets	I^2	F/(df)
Background Factors	.10	15.6*** (7,928)
Main Effects:		
Age Context and Physical Design	.03	8.6** (4,924)
Joint Effects:		
Age Context and Physical Design	.01	3.8* (2,922)
Total (R^2)	.14	12.5*** (13,922)

*$p < .05$. **$p < .01$. ***$p < .001$.

shown.

As indicated in Table 2, with the effects of background factors controlled, the addition of physical design and age mix factors to the analysis produced a small but highly significant increment in explained variance. Thus, the set of physical design and age mix factors was found to be highly related to fear even after controlling for any differences due to background factors. However, the results from the subsequent inclusion of interaction terms into the equation indicated that the effects of age mix and physical design were not independent. The conditional relationship between age mix and physical design accounted for significant variance beyond that explained by their separate or additive effects. As predicted, then, the relationship between physical design and fear was partially dependent on age context, and vice versa.

It was predicted that fear is greater among elderly who reside in larger housing projects, high-rise buildings, low age-dense sites, and integrated rather than segregated arrangements. Table 3 indicates how the interactions and each of the separate effects for physical design and age mix relate to fear independent of any confound that might exist between them and controlling for demographic differences.

Evidence of a main effect for physical design was found for building height, but was opposite to that predicted by defensible space theory and demonstrated among public housing residents in general (Newman, 1972; Newman & Franck, 1981). Those who occupied low-rise buildings were significantly more fearful of crime than were those in high-rise buildings. Project size, however, had no separate influ-

Table 3

Hierarchical Regression Analysis:
Relationship Between Fear of Crime and Background Factors, Age Context Factors, Physical Design Factors, and the Joint Effects of Age Context and Physical Design

	Fear of Crime	
	Simple r	Beta Weight
Joint Effects		
Density-by-building height	-.32***	-.34*
Segregation-by-building height	-.18***	-.23
Additive Effects		
Segregation	-.12***	.16***
Density	-.30***	-.28***
Building height	-.17***	-.08*
Project population	.21***	.04
Background Factors		
Sex	.08**	.10**
Age	-.10***	-.05
Race	.08**	.04
Length of residence	.07*	.02
Household size	.05	.01
City of residence	.27***	.27***
Form of questionnaire	.12***	.12***
Total (R^2)		.14***

Note. Entries are standardized regression coefficients (or beta weights) or Pearson correlation coefficients, as indicated. High scores on variables indicate high fear, segregated settings, age-dense sites, high-rise buildings, larger project populations, and being female, older, black, longer-term residents, in households of more than one adult, residents of high-fear cities, and having completed the short-form questionnaire.

*$p < .05$. **$p < .01$. ***$p < .001$.

ence on fear.

A strong main effect of age mix was also present. As predicted, density was significantly and negatively related to fear. Elderly residents of sites in which the percentage of elderly was low were more fearful of crime than were those in age-dense public housing. Contrary to expectation, however, a positive relationship between segregated arrangements and fear emerged. The reversal in sign from the zero-order findings (also shown in Table 3) indicated that suppression of segregation effects was involved at the bivariate level of analysis. Additional examination of the partial correlation coefficients produced in the regression analysis indicated that the source of suppression was density. With the influence of density controlled, elderly residents of segregated settings were found to be more fearful than were those in integrated sites.

Comparison of the additive components indicated that, with joint variance controlled, age context was more strongly related to elderly public housing residents' fear than was physical design. As shown in Table 4, results of the usefulness analysis were consistent with the hypothesis of the relatively stronger influence of age mix over physical design factors on elderly public housing residents' fear of crime. Age mix accounted for approximately 2% of the variance beyond that explained by physical design and background factors. Physical design, on the other hand, explained no additional variance in fear beyond that explained by the other factors considered.

Regardless of relative strength, however, the effects of age mix were modified by the physical design of the site. The interaction

Table 4

Usefulness Analysis:
Sources of Elderly Residents' Fear
in Public Housing

	Fear of Crime
Zero-order Contribution of	
Physical Design Factors	.06**
Age Context Factors	.10**
Background Factors	.10**
Contribution of Physical Design Factors	
Beyond Age Context Factors	.00
Beyond Background Factors	.01*
Beyond Both Age Context and Background Factors	.00
Contribution of Age Context Factors	
Beyond Physical Design Factors	.04**
Beyond Background Factors	.03**
Beyond Both Physical Design and Background Factors	.02*
Total	.13**

Note. All entries are adjusted R^2s.

*$p < .01$. **$p < .001$.

effect was attributable to the significance of the density-by-building height term, while the expected influence of the segregation-by-building height interaction was not supported. The most fearful elderly were those who were residents of low-rise dwellings in low age-dense public housing sites.

Comparing the Effects of Age Mix and Physical Design on the Crime and Social Environments of Elderly Public Housing Residents

The second issue considered in this study was the means by which age mix and physical design are proposed to impact on public housing residents' fear. The roles of the crime and social environments in mediating fear have been demonstrated in prior studies of typical urban communities (Skogan & Maxfield, 1981). Before examining the influence of age mix and physical design on the crime and social environments in public housing, it is important to ascertain that elderly residents' fear is also linked to each of these factors. The relationships between fear and indices of the crime and social environments are shown in Table 5.

With one exception, the expected relationships were found. Fear was significantly higher among those elderly who were recent victims of on-site crime, knew of other site residents victimized in the recent past, perceived crime to be a bigger problem in the site, and reported that the on-site crime situation had been worsening compared to the year before. Similarly, the findings obtained with respect to social factors were, for the most part, also anticipated. Fear was lower among elderly who perceived project residents as being more cohesive, visited with neighbors more, identified disorder and other

Table 5

Relationships Between Fear of Crime and Indices of the Crime and Social Environments Among Elderly Public Housing Residents

	Fear of Crime
Crime Environment	
Experience:	
Direct On-Site Victimization	.18***
Vicarious On-Site Victimization	.17***
Perceptions:	
On-Site Crime Problem	.44***
On-Site Crime Trend	.26***
Social Environment	
Social Integration:	
Resident Cohesiveness	-.32***
Neighboring: Visiting	-.13**
Neighboring: Relying on Neighbors	-.00
Social Order:	
Perceived Disorder	.53***
Perceived Source of Disorder and Crime	.28***
Predictability:	
Ease in Recognizing Strangers	-.06*

Note. Entries are Pearson correlation coefficients. High scores indicate greater fear, recent victimization in an on-site crime, knowing others who were recently victimized, perceiving a greater on-site crime problem, perceiving a trend of worsening crime, greater cohesiveness among residents, more visiting among neighbors, having a neighbor watch one's home while away, greater perceived disorder, perceiving the source of disorder and crime to be other residents, and ease in recognizing strangers.

*$p < .05$. **$p < .01$. ***$p < .001$.

troubling behavior as less problematic, perceived the source of criminal and problematic behavior as "outsiders" rather than other residents, and reported that it is easier to distinguish strangers from those who belong in the site. While not linked to the practice of having neighbors watch the apartment when residents are away, the expected associations between fear and the crime and social environments are generally supported.

To what extent, then, is age context, as compared to the competing explanation of physical design, related to the crime and social environments of elderly residents?

The crime environment. Evidence of age context and physical design effects on the crime environment of elderly public housing residents is presented in Table 6. Perceptions of the crime problem was the only outcome for which addition of both main and joint effects of age mix and physical design resulted in significant increments in variance beyond that explained by background factors. Interactions explained no additional variance in perceptions of the crime trend and main effects did not contribute to explained variance in either on-site direct or vicarious victimization.

The independent and joint contributions of age mix and physical design to crime-related outcomes are detailed in Table 7. Strong main effects of density and segregation were found for perceptions of the crime problem. Elderly who resided in low age-dense or segregated sites were significantly more likely to perceive the local crime problem as serious. Age mix was not related, however, to perceptions of the crime trend. (With respect to direct on-site victimization, a

Table 6

The Crime Environment:
Hierarchical Regression Analyses of Criterion Variance Accounted for by
Background Factors and the Main and Joint Effects of Age Context and Physical Design

	Predictor Variable Sets							
	Background Factors		Main Effects: Age Context and Physical Design		Joint Effects: Age Context and Physical Design		Total	
Criterion Variables	I^2	F/(df)	I^2	F/(df)	I^2	F/(df)	R^2	F/(df)
Experience:								
Direct On-Site Victimization	.00	1.30 (7,928)	.01	2.03 (4,924)	.01	3.22* (2,922)	.02	2.30** (13,922)
Vicarious On-Site Victimization	.01	2.23* (7,928)	.00	.07 (4,924)	.01	4.69** (2,922)	.02	2.42** (13,922)
Perceptions:								
On-Site Crime Problem	.05	7.52*** (7,868)	.06	15.26*** (4,864)	.01	6.23** (2,862)	.12	10.61*** (13,862)
On-Site Crime Trend	.01	2.63* (7,767)	.05	9.75*** (4,763)	.01	2.32 (2,761)	.07	5.35*** (13,761)

*$p < .05$. **$p < .01$. ***$p < .001$.

Table 7

Hierarchical Regression Analyses:
Relationships Between the On-Site Crime Environment and Background Factors and the Main and Joint Effects of Age Context and Physical Design

	Direct Victimization	Vicarious Victimization	Perceived Crime Problem	Crime Trend
Joint Effects				
Density-by-building height	.48**	-.45**	-.48**	-.39*
Segregation-by-building height	-.29	-.11	.86***	.59*
Additive Effects				
Segregation	.01	.07	.19***	.04
Density	-.16*	-.12	-.32***	-.16
Building height	-.03	.00	.09*	.23***
Project population	-.12**	-.03	.09*	.07
Background Factors				
Sex	-.06	-.03	-.01	-.01
Age	-.07*	-.10**	-.09*	.02
Race	-.04	-.08*	-.07*	.02
Length of residence	.04	.03	.09**	.01
Household size	-.06	-.05	-.02	-.09*
City of residence	-.00	.02	.18***	.08*
Form of questionnaire	-.01	.02	.04	.11**
Total (R^2)	.02**	.02**	.12***	.07***

Note. Entries are standardized regression coefficients, or beta weights. High scores on variables indicate direct victimization, knowing others who were on-site crime victims, perceptions of crime as a big problem, perceptions of crime as worsening, segregated settings, age-dense sites, high-rise buildings, larger project populations, and being female, older, black, longer-term residents, in households of more than one adult, residents of high-fear cities, and respondents of the short-form questionnaire. The entries for Total R^2s are the adjusted multiple correlation coefficients.

*$p < .05$. **$p < .01$. ***$p < .001$.

significant beta value was found for density. However, since main effects as a set accounted for no meaningful variance in either type of victimization experience, the beta was not interpreted.)

Physical design made a significant but smaller contribution to perceptions of the crime problem than did age mix. As predicted in defensible space theory, those who resided in high-rise buildings or larger projects perceived crime as a greater problem on-site. Occupancy of a high-rise apartment was also related to the perception of crime as worsening. (With respect to direct on-site victimization, a significant beta value was found for project size. However, since main effects as a set accounted for no meaningful variance in either type of victimization experience, the beta was not interpreted.)

Examination of additive effects suggested that the primary source of perceptions of the on-site crime problem was age mix and physical design was the stronger influence on perceptions of the on-site crime trend. The proposed roles of age mix and physical design as sources of different aspects of the crime environment were supported in the usefulness analyses shown in Table 8. As expected, age mix accounted for more variance beyond that explained by all other factors in the perceived crime problem. With regard to perceptions of the crime trend, however, it was physical design that accounted for more variance beyond that explained by other factors.

Over and above separate effects, tests of interaction terms indicated that elderly who reside in high-rise buildings situated within age-dense projects were particularly likely to have been victimized on-site in the recent past, but were also less likely to know

Table 8

Usefulness Analysis:
Sources of the On-Site Crime Environment
in Public Housing

	Perceived Crime Problem	Crime Trend
Zero-order Contribution of		
Physical Design Factors	.06***	.04***
Age Context Factors	.09***	.02***
Background Factors	.05***	.01*
Contribution of Physical Design Factors		
Beyond Age Context Factors	.01*	.03***
Beyond Background Factors	.03***	.05***
Beyond Both Age Context and Background Factors	.01*	.04***
Contribution of Age Context Factors		
Beyond Physical Design Factors	.04***	.01*
Beyond Background Factors	.05***	.01*
Beyond Both Physical Design and Background Factors	.03***	.00
Total	.11***	.06***

Note. All entries are adjusted R^2s.

*p < .05. **p < .01. ***p < .001.

of other victimized residents or to perceive the local crime problem as severe. On the other hand, elderly residents of high-rise units segregated from younger residents were more likely to report the local crime problem as serious, but did not significantly differ in direct and vicarious victimization experience beyond what was accounted for by the separate effects of age mix and physical design. (Since interactions as a set accounted for no additional variance in perceptions of the crime trend, the significant beta value associated with each interaction term was not interpreted.)

The social environment. Evidence of age context and physical design effects on the social environment of elderly public housing residents is presented in Table 9. With the influence of background factors controlled, small but significant increments in explained variance due to the main effects of age mix and physical design were detected for all of the social outcomes except the typical neighboring behavior of visiting. However, predictability, as measured by the ease with which residents are distinguished from strangers, was the only outcome for which significant interaction effects were also present. Since neither main nor joint effects were found to influence visiting behavior, this aspect of the social integration explanation was not considered in later analyses.

The nature of age context and physical design effects on the social environment of elderly public housing residents is detailed in Table 10. The results of the regression analyses indicated that density is the variable most consistently and strongly related to social outcomes. As predicted, elderly residents of high age-dense

Table 9

The Social Environment: Hierarchical Regression Analyses of Criterion Variance Accounted for by Background Factors and the Main and Joint Effects of Age Context and Physical Design

	Predictor Variable Sets							
	Background Factors		Main Effects: Age Context and Physical Design		Joint Effects: Age Context and Physical Design		Total	
Criterion Variables	I^2	F/(df)	I^2	F/(df)	I^2	F/(df)	R^2	F/(df)
Social Integration:								
Resident Cohesiveness	.03	5.34*** (7,919)	.01	2.70* (4,915)	.00	1.16 (2,913)	.04	4.39*** (13,913)
Neighboring: Visiting	.02	2.20* (6,421)	.00	-	.00	-	.02	1.60 (12,415)
Neighboring: Rely on Neighbors	.02	2.39* (6,416)	.04	4.43** (4,412)	.00	.14 (2,410)	.06	3.27*** (12,410)
Social Order:								
Perceived Disorder	.14	12.29*** (6,422)	.03	3.43** (4,418)	.00	.59 (2,416)	.17	8.16*** (12,416)
Source of Crime and Disorder	.10	7.57*** (6,340)	.09	9.01*** (4,336)	.00	-	.19	7.55*** (12,334)
Predictability:								
Ability to Distinguish Strangers	.01	2.08* (7,805)	.01	2.53* (4,801)	.01	3.75* (2,799)	.03	2.98*** (13,799)

*$p < .05$. **$p < .01$. ***$p < .001$.

Table 10

Hierarchical Regression Analyses: Relationships Between the Social Environment and Background Factors and the Main and Joint Effects of Age Context and Physical Design

	Cohesiveness	Rely on Neighbors	Perceived Disorder	Source of Disorder	Predictability
Joint Effects					
Density-by-building height	.30	.23	-.39	.13	-.04
Segregation-by-building height	-.43	-.50	.20	-.05	-.71**
Additive Effects					
Segregation	-.04	-.06	.04	.05	-.10
Density	.15*	.15	-.31***	-.39***	.21**
Building height	.00	-.25***	.08	-.21***	-.06
Project population	-.06	.03	-.01	.00	-.00
Background Factors					
Sex	.03	-.10	.04	.05	-.07
Age	.06	-.10	-.11*	-.02	-.07*
Race	.02	.11*	.09	-.02	.04
Length of residence	-.07*	.01	.12**	.01	.04
Household size	.01	-.02	.04	-.02	.04
City of residence	-.16***	-.01	.28***	.35***	.04
Form of questionnaire	-.01	NA	NA	NA	.06
Total (R^2)	.04***	.06***	.17***	.19***	.03***

Note. Entries are standardized regression coefficients, or beta weights. High scores on dependent variables indicate greater resident cohesiveness, relying on neighbors to watch home, greater perceived disorder, perceiving the source of disorder and crime to be other residents, and ease in recognizing strangers. The entries for Total R^2s are the adjusted multiple correlation coefficients.

*$p < .05$. **$p < .01$. ***$p < .001$.

sites were more likely to view residents as cohesive, perceive disorder as less of a problem overall, attribute on-site crime and disorder to "outsiders" rather than to other residents, and report greater ease in distinguishing strangers from those who belong in the site. Nevertheless, elderly in high age-dense projects were no more likely, when leaving for a couple of days, to rely on neighbors to watch their homes, although residents of low-rise dwellings were. Building height was also related to the perceived source of crime and disorder, with those occupying low-rise units more likely to attribute problems to other residents. Neither the segregation of elderly nor the size of the project contributed significantly to any of the social outcomes.

The results of the usefulness analyses, shown in Table 11, tended to support regression findings of the relative strengths of each factor in explaining social outcomes. Age mix accounted for more variance beyond that explained by all other factors in perceptions of disorder, attributions to the source of crime and disorder, and the ability to distinguish residents from strangers, while physical design explained more variance in the reliance on neighbors to watch the home. However, with all joint variance assigned to previously entered factors, neither age mix nor physical design clearly emerged as the source of perceptions of resident cohesiveness.

Interaction effects, which were limited to the predictability aspect of the social environment, were attributable to a significant conditional relationship between segregation and building height. Although neither factor had an independent effect, elderly housed in high-rise buildings who were also segregated from other, younger res-

Table 11

Usefulness Analyses: Sources of the Social Environment in Public Housing

	Social Integration		Social Order		Predictability
	Cohesiveness	Rely on Neighbors	Perceived Disorder	Source of Disorder	Distinguish Neighbors
Zero-order Contribution of					
Physical Design Factors	.03***	.05***	.06***	.12***	.01*
Age Context Factors	.04***	.01*	.14***	.17***	.01*
Background Factors	.03***	.02*	.14***	.10***	.01*
Contribution of Physical Design					
Beyond Age Context Factors	.00	.04***	.00	.01*	.00
Beyond Background Factors	.01*	.04***	.00	.05***	.00
Beyond Both Age Context and Background Factors	.00	.03***	.00	.02*	.00
Contribution of Age Context					
Beyond Physical Design Factors	.01**	.00	.08***	.06***	.00
Beyond Background Factors	.01**	.01	.03**	.07***	.01**
Beyond Both Physical Design and Background Factors	.00	.00	.02**	.04***	.01*

Note. All entries are adjusted R^2s.

*p < .05. **p < .01. ***p < .001.

idents were especially likely to report difficulty in recognizing those who legitimately belong in the site from those who do not.

Assessing the Accuracy of Predicting from Age-Heterogeneous Public Housing to All-Elderly Public Housing

Approximately 80% of the sample examined in this study resided in age-heterogeneous sites of less than 50% elderly, while 20% resided in all-elderly sites. A final issue which merits attention is the question of whether heterogeneous sites and elderly-only sites may be considered, in fact, to fall along a continuum of density. That is, can effects of density which would be obtained in age-heterogeneous sites be generalized to explain outcomes in all-elderly housing or are there properties of all-elderly housing which cannot be predicted from the effects of density in age-heterogeneous sites?

To examine whether density is continuous in predicting from age-heterogeneous sites to all-elderly housing, a reanalysis was performed on fear of crime, perceptions of the crime problem, perceptions of disorder, and the attributed source of problems in the site. Each outcome was particularly well-measured in this study. As previous examination indicates, background, age mix, and physical design factors reliably explained meaningful variance overall in each of the four outcomes (i.e., more than 10%). The analyses were repeated utilizing only the sample of elderly housed in age-heterogeneous sites (753 of 945 respondents). The regression equations which resulted were then applied to the data of respondents housed in all-elderly sites and predicted scores for each outcome computed. Predicted scores were then compared through *t*-tests for correlated data

to outcomes actually obtained by respondents in all-elderly sites.

A significant difference between actual and predicted scores was detected for three of the four criteria examined. On average, predictions based upon the relationship of density to outcomes in age-heterogeneous sites tended to underestimate the extent of fear ($t(190) = 5.78$, $p < .001$) and the perceived severity of disorder ($t(84) = 4.06$, $p < .001$) among residents of all-elderly housing. On the other hand, the likelihood of attributing crime and social order problems to other residents rather than to "outsiders" was overestimated somewhat ($t(65) = 2.39$, $p < .05$). The mean actual and mean predicted perceived severity of the crime problem did not differ significantly ($t(182) = .34$, n.s.).

These findings suggest that the relationship between density and some important outcomes for the elderly may not be strictly linear. That is, increases in density are not necessarily associated with consistent increases in beneficial outcomes, such as greater feelings of safety. If, as theory suggests, density is a causal factor in producing these outcomes, the implication of such findings is that continuing to increase density beyond some point which may fall well below full saturation results in little or no gain for elderly residents, while increasing their isolation from the nonelderly.

DISCUSSION

The results of this study support the hypotheses that there are important relationships between the age mix and physical design of public housing sites and fear of crime among elderly residents. These findings also indicate that age mix and physical design are linked to factors in the crime and social environments thought to influence fear and thus suggest how their impact is mediated. Table 12 summarizes the relationships between each of the 11 outcomes examined and density, segregation, building height, project size, and the interactions of segregation or density with building height.

Age Mix Effects

The findings indicated that age-homogeneity is not unidimensional as conceptualized by Lawton and Yaffe (1980) and Teaff et al. (1978). Density and segregation were found to be not only essentially distinct strategies for housing elderly when both elderly and nonelderly reside in the same site, but were also differentially associated with fear and other crime and social outcomes.

Strong evidence for age mix theory was found in a consistent effect of density, although the effects may not be strictly linear. As predicted, elderly residents of age-dense sites were significantly less fearful of crime than were those residing in sites where the percentage of elderly was low overall. Although differences were not detected in the probability of having been personally or vicariously

Table 12

Summary of Age Mix and Physical Design Effects

	Age Context		Physical Design		Interactions	
Dependent Variables	Density	Segregation	Building Height	Project Population	Segregation-by-Building Height	Density-by-Height
Fear of Crime	-	+	-	0	0	-
Direct Victimization	0	0	0	0	0	+
Vicarious Victimization	0	0	0	0	0	-
Perceived Crime Problem	-	+	+	+	+	-
Perceived Crime Trend	0	0	+	0	0	0
Resident Cohesiveness	+	0	0	0	0	0
Neighboring: Visiting	0	0	0	0	0	0
Neighboring: Rely on Neighbors	0	0	-	0	0	0
Perceived Disorder	-	0	0	0	0	0
Source of Disorder	-	0	-	0	0	0
Ease in Distinguishing Strangers	+	0	0	0	-	0

Note. The symbol "+" indicates a significant positive relationship, "-" a significant negative relationship, and "0" no significant effect. High scores on dependent variables indicate greater fear, recent victimization, knowing others recently victimized, a greater perceived crime problem, a perceived trend of worsening crime, greater cohesiveness, more visiting, relying on neighbors, greater perceived disorder, attributes disorder to other residents, and ease in distinguishing strangers. High scores on independent variables indicate age-dense sites, segregated sites, high-rise buildings, and larger project populations.

victimized while on-site, residence in an age-dense site was associated with the perception of crime as less of a problem on-site. Thus, the crime environment may have been less threatening in general.

Similarly, there was support for the idea that density is an important determinant of the social environment through its impact on social integration, social order in residents' behavior, and predictability. Evidence of age mix effects on the social integration of elderly was supported in the finding that elderly in age-dense sites expressed a greater "sense of community," though neither visiting nor relying on neighbors to watch one's home varied systematically with density. The second outcome predicted to result from age-homogeneity in public housing is an increase in social order; resident behavior is expected to be more consistent with the norms and standards of the elderly. As hypothesized, elderly in age-dense sites perceived rude or troublesome behavior to be less of a problem among residents and were more likely to attribute any on-site problems to the actions of "outsiders." A third explanation of age mix effects hypotheses that predictability increases with greater age-homogeneity. Evidence consistent with the predictability hypothesis was found in the greater reported ease with which elderly in age-dense sites are able to distinguish those who belong in the project from those who do not.

Although a high density of elderly was associated with pervasive and beneficial outcomes, the controversial role of segregation within age mix theory and public policy planning appeared to be justified. There was no support for the hypothesis that segregation influences the social environment of elderly public housing residents. Not one

of the social factors examined was dependent on the proximity or distance of elderly from other public housing residents. However, segregation was linked to negative crime outcomes. With the effects of density controlled, elderly segregated in some manner were more fearful and perceived crime as a more serious problem on-site than did those housed randomly among younger project residents. Since, in addition, experience with recent direct or vicarious on-site victimization did not differ, the segregated arrangement did not appear, as hypothesized by Lawton (1976a) and Newman (1972), to protect aging residents against the consequences of crime.

The negative crime-related outcomes associated with segregation may be somewhat unexpected since one byproduct of this strategy is an artificial increase in the density of elderly in the immediate local environment. When housed in one building, for example, all near neighbors are also older even though the elderly may represent no more than 10% of the project population as a whole. That segregated elderly are more fearful and perceive crime as more severe indicates that clustering or segregation does not compensate for the effects of low density.

One explanation of these results is suggested in Lawton's (1976a) conceptualization of segregation as a "barrier" which limits the amount of available information between young and old. Such an information deficit may create anxiety about local crime conditions across the "barrier" which, in turn, increases fear. Thus, segregated elderly may be more fearful because they are unfamiliar with what Skogan and Maxfield refer to as the "rhythms of life around them"

(1981, p. 99).

To examine the information-deficit hypothesis, a simple regression analysis was performed to determine whether segregation is linked to the extent to which elderly residents who reside in family projects lack information about conditions in public housing. Counts were made of the number of "don't know" responses elicited by the five items asking for the rated severity of various crimes and the 13 items asking about disorder in the public housing site. Since the two counts were highly related ($r(346 = .71, p < .001)$, scores were standardized and combined to form a single index.

As shown in Table 13, age mix was related to the extent to which elderly residents were unaware of crime and disorderly conditions in public housing. Contrary to expectation, however, lack of information was associated with density rather than segregation. Elderly in high age-dense sites were significantly less knowledgeable about events on average than were those residing in sites with few elderly. Moreover, elderly residents' lack of information was associated with somewhat lower fear, although the relationship was generally weak ($r(346) = -.08, p < .07$). Thus, there was no support for the hypothesis that segregation results in any barrier to information nor was the lack of information necessarily detrimental to elderly public housing residents' feelings of safety. Continued investigation is warranted to determine in what other sense segregation might pose a barrier to the elderly's well-being, particularly with regard to the consequences of crime.

Table 13

Simple Regression Analysis:
The Relationship Between Elderly Residents' Lack of Information about Public Housing Conditions and Age Context, Physical Design, and Background Factors

	Lack of Information
Age Context	
Segregation	.05
Density	.23***
Physical Design	
Building height	.05
Project population	-.02
Background Factors	
Sex	.02
Age	.05
Race	.35***
Length of residence	.07
Household size	-.11
City of residence	.11
Total (R^2)	.13***

Note. Entries are standardized regression coefficients (or beta weights). High scores on variables indicate a greater lack of information about conditions in public housing, segregated settings, age-dense sites, high-rise buildings, larger project populations, and being female, older, black, longer-term residents, in households of more than one adult, and residents of high-fear cities.

***$p < .001$.

Physical Design Effects

The findings also indicated that the physical design of public housing is related to fear and the crime and social environments of elderly residents. However, specific predictions about the nature of design effects as derived from defensible space theory (Newman, 1972) were only partially supported.

Elderly respondents reported being less fearful of crime when residents of high-rise rather than low-rise buildings, regardless both of the density of other elderly in the site and whether or not segregated from younger residents. The finding was opposite in direction of defensible space predictions and findings for public housing populations in general and Newman's (1972) specific predictions regarding the elderly. Neither segregation nor density governed the elderly's positive outcome associated with residence in a high-rise building.

A main effect of building height on the elderly's crime environment was also found. While not related to either experience with direct or indirect victimization, residence in a high-rise building was associated with perceptions of the local crime problem as more severe and as having worsened in the recent past.

The negative crime-related outcomes are consistent with predictions of defensible space theory, but are somewhat unexpected in view of high-rise elderly's lower fear. These findings suggest that high-rise developments have protective value for elderly residents against the affective consequences of crime (anxiety and fear) even while the probability of direct or vicarious victimization does not appear to be

lessened. Perhaps because high-rise elderly do not need to walk far or venture outside to visit among other residents and, thus, limit exposure to conditions in the site as a whole, the perception of being at risk is lower.

Contrary to the expectations of defensible space theory, evidence of physical design effects on the social environment of elderly public housing residents was limited. As predicted in the social integration hypothesis of design effects, residents of low-rise dwellings were significantly more likely, when leaving for a couple of days, to rely on neighbors to watch the home. On the other hand, although high-rise buildings are hypothesized to lead to a breakdown in the local social order and informal social controls, low-rise rather than high-rise residents were more likely to attribute problems in the site to other residents. Building height was not related, however, to the perceived social order nor to other indicators of social integration, such as the perceived cohesiveness of residents and visiting among neighbors. Similarly, there was no support for the predictability explanation of design effects; building height was not associated with ability to distinguish strangers.

With one exception, project size was not independently related to fear nor the crime and social environments of elderly public housing residents. The exception involved perceptions of the local crime problem. Consistent with the defensible space prediction, elderly who resided in larger projects rated the problem as more severe, on average, than did those in smaller sites.

In general, then, the findings with respect to the proposed

influence of physical design derived from the defensible space concept are mixed and less pervasive than expected from theory or previous findings. The differences between the results of this study with a specialized public housing population of elderly and other studies with more diverse populations (Newman, 1972; Newman & Franck, 1982) suggest that age may be a critical factor in understanding the influence of the built environment on social behavior and attitudes.

The Relative Merits of Physical Design and Age Mix on Elderly Public Housing Residents' Crime-Related Well-Being

Direct comparisons of the utility of age mix and physical design in predicting the eight outcomes for which main effects were detected yielded clear results for seven. In general, there was support for the hypothesis that age mix tends to be the relatively more important determinant of crime and social outcomes for elderly public housing residents than is physical design. While physical design was more strongly related to perceptions of the trend in crime and reliance on neighbors to watch the home, age mix had greater utility in explaining fear, perceptions of the crime problem, perceptions of disorder, attributions to the source of problems in the site, and predictability. As predicted by Newman (1972), however, the effects of age mix and physical design were not entirely independent.

Significant age mix-by-physical design interactions were detected for fear, both direct and vicarious victimization, perceptions of the crime problem, and predictability. On average, elderly who resided in high-rise buildings in high age-dense sites were the least fearful of crime, knew of few other victims, and perceived the local

crime problem as less severe, despite the finding that their probability of having been personally victimized in the recent past was significnatly higher. On the other hand, elderly who were housed in high-rise buildings but segregated from younger residents were especially likely to view the local crime problem as serious and reported greater difficulty in distinguishing strangers on the site from residents. Thus, the beneficial outcomes expected to result from high-rise segregated housing for elderly (Newman, 1972) were not confirmed. Notwithstanding, there was support for the hypothesis that age mix modifies the impact of physical design, and vice versa, particularly with respect to the crime environment of elderly public housing residents.

CONCLUSION

Although the issue of housing for the elderly has risen in the public consciousness only in the last few years, its place on the public agenda was recognized in 1956 when the elderly were designated for special attention in federal housing assistance programs. While less than 5% of the nation's elderly currently reside in public housing sites, the number of housing units occupied by elderly families has increased markedly since 1956. In 1965, for example, 28% of all such households were elderly. By 1972, elderly families accounted for 41% of the units available for occupancy (U.S. Department of Housing and Urban Development, 1974). In addition, perhaps 20% to 25% of the low- to moderate-income elderly now housed conventionally desire new and affordable housing (Lawton, 1975), with some estimates suggesting the number is even higher (Carp, 1976). With the current levels of demand and the demands projected for an aging population, the need for the development of housing policies for elderly citizens informed by empirical examination has increasingly higher priority on the public agenda (Daum, 1982).

If optimal public housing environments are to be developed, future research will need to continue to evaluate the roles of density, segregation, and physical properties of sites on the quality-of-life and well-being of elderly residents. In particular, continued systematic evaluation of housing options and experimentation with

a wide range of densities and methods of distributing elderly through sites is warranted.

The findings to date, including those reported in this study, have been cross-sectional and correlational in nature and subject to possible self-selection biases not captured by background factors (Carp, 1976). Although findings are, in large measure, consistent with what would be predicted from theory, causal inference about the impact of density, segregation, and physical design is necessarily speculative until demonstrated empirically through controlled experimentation and longitudinal examination in field settings.

Current housing strategies developed out of a recognition of the special needs of some elderly and certain assumptions about the prosthetic value that density, segregation, and physical design have for improving the quality-of-life of aging citizens (Gubrium, 1972; Kahana et al., 1980; Lawton, 1970a, 1977). As experience with a number of programs has demonstrated, however, even as some objective circumstances are improved, policies for the elderly often result in a number of unintended and negative outcomes (Cook, 1982; Daum, 1982; Nelson, 1982; Neugarten, 1982). The three outcomes prevalently cited include reinforcement of stereotypes of the elderly as a nonproductive and powerless "problem" group, increases in dependency rather than self-sufficiency, and "resentment of benefit recipients by nonrecipients" (Cook, 1982, p. 199) during resource-scarce times. The extent to which various housing strategies are vulnerable to broad, unintended outcomes must also be assessed.

FOOTNOTES

[1]Skogan and Maxfield (1981) compared residents' perceptions of the seriousness of crime problems in the neighborhood with the neighborhood's crime rates based on official crime reports and up-to-date population estimates. They concluded that ratings of "neighborhood conditions paralled official crime counts for the area" (p. 87). Further, "these data indicate that citizens' assessments of conditions around them can be used as a useful 'stand-in' measure of the incidence of crime, at least as recorded by the police" (p. 88).

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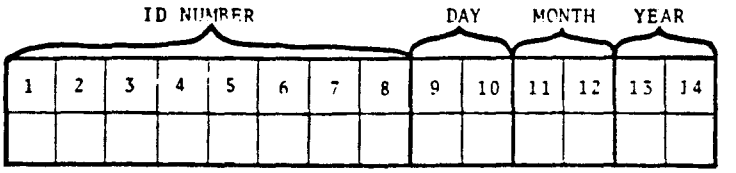
APPENDIX A

OMB NO.: 2528-0090
EXPIRES: SEPTEMBER, 1982



CITIZENS' ATTITUDE AND VICTIMIZATION SURVEY

Respondent lives in...(CIRCLE APPROPRIATE CATEGORY BELOW.)

15- 1 Demonstration Project
2 Surrounding area of Demonstration Project
3 Comparison Project
4 Surrounding area of Comparison Project

16-Type of Interview Personal...1 Telephone...2

17-Number of persons listed_____

18-Selection table assigned_____

19-Number of incident reports completed_____

INTRODUCTION AND RESPONDENT SELECTION

Hello, my name is _____ and I work for DAMANS and Associates, a national research company in the Washington, D.C., Metropolitan Area. [SHOW I.D. CARD.] We are doing a study to find out how people feel about their neighborhood and I would like to talk with you for a few minutes. All the information you give will be kept strictly confidential and it will be used only to prepare a report in which no one's answers will ever be identified except as may be required by law. Your participation is voluntary but your cooperation is valuable.

To be sure that we have a good idea of the opinions of everyone in this area, I have been given a very strict method of selecting the person I talk with in any home. First, please tell me how many people 16 years old or older (*live here/are listed on the lease*)? Starting with the oldest male, please tell me the first name and age of all the males. Then, please do the same for the name and age of the females.

[LIST THE FIRST NAME, SEX AND AGE OF ALL PERSONS 16 YEARS OLD AND OLDER WHO LIVE IN THIS HOUSEHOLD IN THE TABLE BELOW. ASSIGN THE NUMBER "1" TO THE OLDEST MALE, "2" TO THE SECOND OLDEST MALE, ETC. THEN ASSIGN CONTINUOUS NUMBERS TO THE FEMALES. LOOK AT THE SELECTION TABLE TO FIND OUT WHO IS TO BE INTERVIEWED.]

Okay, according to my instructions, I am supposed to talk to _____.

[IF SELECTED RESPONDENT IS OTHER THAN THE FIRST PERSON CONTACTED, MAKE ARRANGEMENTS TO INTERVIEW THE PERSON SELECTED.]

List all persons 16 and over. List all males first, starting with the oldest. Then list all females.	Sex	Age	Assigned Number	Indicate Respondent with check

These first few questions are about you and your neighborhood.

1a. First, how long have you lived in (*NAME/this neighborhood*)?

_____ YEARS _____ MONTHS 20-23

BOX A
INTERVIEWER: CIRCLE ONE
R LIVES IN HOUSING PROJECT.....1[SKIP TO Q.2a]
R LIVES IN SURROUNDING AREA.....2[ASK Q.1b]

1b. Do you own or rent your home?

OWN .....1[SKIP TO Q.3a] 24
RENT 2
DON'T KNOW .....8[SKIP TO Q.3a]

2a. When people move into a new place, there are a lot of things they need to find out. When you moved here did anyone talk to you about what your lease says?

YES.....1 25
NO.....2[SKIP TO Q.3a]
DON'T KNOW.....8[SKIP TO Q.3a]
NA.....9[SKIP TO Q.3a]

2b. Who was it that talked to you? [CHECK ALL THAT APPLY]

A NEIGHBOR ..... ☐ 26
THE MANAGER ..... ☐ 27
SOMEONE ELSE ..... ☐ 28
RESIDENT ASS. REP. ... ☐ 29
[SPECIFY_____]
DON'T KNOW ..... ☐
NA..... ..... ☐

3a. How much do you like living in (*NAME/this neighborhood*)? Do you...

Like it very much 4 30
Like it 3
Dislike it, or 2
Dislike it very much? .1
DON'T KNOW 8

3b. What is the <u>one</u> thing you <u>like</u> most about living here?

_____ 31-32

_____

_____

3c. What is the <u>one</u> thing you <u>dislike</u> the most about living here?

_____ 33-34

_____

_____

4. Do you think this is a better or a worse place to live than since Easter of 1980? Would you say ...

Much better 5 35
Slightly better 4
About the same 3
Slightly worse, or 2
Much worse? 1
DON'T KNOW 8
NA (RESIDENT LESS THAN
ONE YEAR) 9

5. Would you recommend (*NAME/this neighborhood*) to any of your friends if they were looking for a place to live? *36*

YES 3
MAYBE 2
NO 1
DON'T KNOW 8

6. In general, how easy or difficult is it for you to tell someone who does not live or work here from someone who does? Would you say it's... *37*

Very easy 4
Easy 3
Difficult, or 2
Very difficult? 1
DON'T KNOW 8

7. Some people feel their neighborhood is a real home to them. Other people think of their neighborhood as just a place where they happen to be living. Which of these comes closest to the way you feel. Do you feel this is a... *38*

Real home, or 1
Just a place to live? ..2
DON'T KNOW 8

8. In some neighborhoods, people do things together and help each other. In other neighborhoods, people mostly stick to themselves and go their own way. What about (*NAME/this neighborhood*), would you say it's a place where people... *39*

Help each other, or 1
Go their own way? 2
DON'T KNOW 8

9. In the last week, that is, since last (DAY OF INTERVIEW), about how many times have you done the following:

a. Been in the home of someone in (*NAME/this neighborhood*)? *40-41*

NUMBER OF TIMES _____

b. Had any of the people from (*NAME/this neighborhood*) in your home? *42-43*

NUMBER OF TIMES _____

c. Other than that, how many times have you talked to any of the people from (*NAME/this neighborhood*) in the last week? *44-45*

NUMBER OF TIMES _____

d. In the last week, how many times have you left your building and walked in (*NAME/this neighborhood*) during the day? *46-47*

NUMBER OF TIMES _____

e. What about at night? *48-49*

NUMBER OF TIMES _____

BOX B

INTERVIEWER: CIRCLE ONE AND FOLLOW SKIP
R LIVES IN HOUSING PROJECT.....1[ASK Q.10]
R LIVES IN SURROUNDING AREA.....2[SKIP TO Q.12a]

10. In general how would you rate the the work done by: [IF ANY OF THE ITEMS DO NOT APPLY, CODE 8]

	Would you say it is... Good	Fair	Poor	DK/NA	
a. The project manager?	3	2	1	8	50
b. The maintenance people?	3	2	1	8	51
c. Tenant/Resident rganization?	3	2	1	8	52
[INTERVIEWER: DO NOT ASK "d" IF NO PHA POLICE] d. The Housing Authority Police/ Security Guards?	3	2	1	8	53

11. In general how much say do you think people in (*NAME*) have about decision made by the Housing Authority? Would you say they have...

A lot of say 1
Some say 2
Very little say, or 3
No say 4
DON'T KNOW 8 54

12a. How good a job do you think the city police do in providing protection to the residents in (*NAME/this neighborhood*)? Do they do a...

Good job 3
Fair job, or 2
Poor job? 1
DK/NA 8 55

12b. What kind of treatment do you think the city police give to residents here in (*NAME/this neighborhood*)? Would you say they treat them...

Very good 4
Good 3
Bad, or 2
Very bad 1
DON'T KNOW 8 56

12c. How many times did you see city police officers here in (*NAME/this neighborhood*) in the last week? That is, since last (DAY OF INTERVIEW).

NUMBER OF TIMES _____ 57-59

DON'T KNOW 88

12d. If you saw someone being assaulted here and you called the city police for help, how long do you think it would take for them to come?

HOURS: _____ MINUTES _____ 59-62

WOULDN'T COME 7777
DON'T KNOW 8888

13. Now, I'd like you to tell me whether each of the following is a big problem, somewhat of a problem, or not a problem at all here. PROBE AS NECESSARY: "Would you say that's a big problem, somewhat of a problem or not a problem at all?"

		BIG	SOME	NOT	DK/NA	
a.	Neighbors fighting with each other	3	2	1	8	63
b.	Too many rules and regulations	3	2	1	8	64
c.	Dogs	3	2	1	8	65
d.	Abandoned cars	3	2	1	8	66
e.	People drinking too much	3	2	1	8	67
f.	Roaches, mice, or rats	3	2	1	8	68
g.	Neighbors being too nosy	3	2	1	8	69
h.	People being mugged	3	2	1	8	70
i.	People using drugs or other things to get "high"	3	2	1	8	71
j.	People who say insulting things or bother people as they walk by	3	2	1	8	72
k.	Rape or other sexual attacks	3	2	1	8	73
l.	People leaving garbage or trash lying around	3	2	1	8	74
m.	People breaking in or sneaking into homes to steal something	3	2	1	8	75
n.	People selling drugs	3	2	1	8	76
o.	Bad or slow maintenance	3	2	1	8	77
p.	People being too suspicious of each other	3	2	1	8	78
q.	Groups of teenagers hanging around and causing trouble	3	2	1	8	79
r.	Poor garbage collection	3	2	1	8	80
s.	Vandalism (PROBE: things like people breaking windows, writing on walls, or damaging cars)	3	2	1	8	81
t.	People beating their children	3	2	1	8	82
u.	Neighbors who make too much noise	3	2	1	8	83
v.	People being robbed or having their purses or wallets taken	3	2	1	8	84
w.	People living in (*NAME*) who are not on the lease	3	2	1	8	85
x.	Bad outside lighting	3	2	1	8	86
y.	Too little play ground or recreational space	3	2	1	8	87

14a. Now thinking of crime in (*NAME/this neighborhood*), do you believe that the amount of crime here is...

A very big problem 4
A big problem 3
A small problem, or 2
No problem at all? 1
DON'T KNOW 8 *88*

14b. Compared to Easter of 1980, do you think crime here is...

Much less of a problem 5
Less of a problem 4
About the same 3
More of a problem, or 2
Much more of a problem? ...1
DON'T KNOW 8
NA (RESIDENT LESS THAN ONE YEAR).....9 *89*

15. In general, how safe do you feel here? Would you say you feel...

Very safe 4
Safe 3
Unsafe, or 2
Very unsafe? 1
DON'T KNOW 8 *90*

16. Now, how worried are you that:

	Would you say you are... Very Worried	Somewhat Worried	Not or Worried At All	DK/ NA	
a. Someone will try to harm you in (*NAME/this neighborhood*)?	3	2	1	8	*91*
b. Someone will take something from you here in (*NAME/this neighborhood*)?	3	2	1	8	*92*
c. Someone will try to break into your home?	3	2	1	8	*93*
d. Someone will try to steal or damage your car here in (*NAME/this neighborhood*)?	3	2	1	8	*94*

17a. Are there any particular places in (*NAME/this neighborhood*) where you feel afraid?

YES 1
NO .....2[SKIP TO Q.18a] *95*

17b. What is the one place in (*NAME/this neighborhood*) where you feel most afraid? [RECORD EXACT LOCATION(S)]

_____ *96-97*

_____

17c. Why do you feel afraid there? [RECORD VERBATIM]

_____ *98-101*

_____

_____

17d. Are you afraid there...

Only at night 1
Only during the day, or ...2
All the time? 3 *102*

18a. How about since last (DAY OF INTERVIEW)? Have there been any times when you felt afraid here in (*NAME/this neighborhood*)?

YES 1 *103*
NO .....2[SKIP TO Q.19]

18b. What happened to make you afraid?

_____ *104-107*

_____

_____

19. If you (and your family) were going to be away from your home for a couple of days, which of the following things would you do? Would you...

		YES	NO	DK	
a.	Get a friend or neighbor to keep an eye on your home but not stay there?	1	2	8	*108*
b.	Leave the lights, radio, or TV on?.....	1	2	8	*109*
c.	Arrange to have someone stay in your home while you were gone?	1	2	8	*110*
d.	Would you do anything else? ..... [IF "YES," SPECIFY _____] _____	1	2	8	*111*

20. Have you or your family done any of the following things since Easter of 1980 to protect your home against crime:

		YES	NO	DK	
a.	Put in extra locks?	1	2	8	*112*
b.	Put in a burglar alarm?	1	2	8	*113*
c.	Obtained a gun for protection?	1	2	8	*114*
d.	Marked any of your property?	1	2	8	*115*
e.	Done anything else? ..... [IF "YES," SPECIFY _____] _____	1	2	8	*116*

		YES	NO	DK	
21. a.	If someone was being mugged outside your home, would you be able to see it easily?	1	2	8	*117*
b.	If a neighbor's home was being broken into while you were home, would you be able to see or hear easily?	1	2	8	*118*
c.	Would you be afraid if a stranger stopped you at night outside your home to ask for directions?	1	2	8	*119*
d.	Do you feel uneasy when you hear footsteps behind you at night?	1	2	8	*120*
e.	Do your neighbors control their children well?	1	2	8	*121*
f.	Do you get nervous when someone knocks at your door when you are not expecting anyone?	1	2	8	*122*
g.	Would you be afraid to report a crime to the police for fear that the criminal would get back at you? ..	1	2	8	*123*
h.	Do you think people around here have a right to live like they want to, even if you don't like it?	1	2	8	*124*
i.	Do you get suspicious when you see people around here that you don't know?	1	2	8	*125*

22a. What do you think is the one thing that would do the most to cut down the crime problem in (*NAME/this neighborhood*)? *126-127*

_____

_____

22b. How much do you think you and your neighbors can do to reduce crime in your neighborhood? Would you say... *128*

A lot 1
Some 2
Very little, or 3
Nothing at all 4
DON'T KNOW 8

23. What kinds of people do you think commit the crimes here? Would you say it's mostly... *129*

People who live here 1
People from outside, or 2
Both? 3
DON'T KNOW 8

24. What about their age? Are most of the people who commit the crimes... *130*

Younger than 12 1
Between 12-15 2
16-19 3
20 and older, or 4
All ages? 5
DON'T KNOW 8

25a. If you saw some teenagers from (*NAME/this neighborhood*) throw a rock through a window, what would you do? [DON'T READ ANSWER CATEGORIES. CHECK ALL BOXES THAT APPLY.] PROBE: "What else?"

DO NOTHING .....☐ *131*
TRY TO DO SOMETHING MYSELF .....☐ *132*
TRY TO GET MY NEIGHBORS INVOLVED .....☐ *133*
REPORT IT TO THE AUTHORITIES .....☐ *134*
OTHER [SPECIFY _____].....☐ *135*
DON'T KNOW .....☐

BOX C

INTERVIEWER: REFER TO Q.25a AND CIRCLE ONE:
R WILL REPORT CRIME .....1[SKIP TO Q.25c]
R WILL NOT REPORT CRIME .....2[ASK Q.25b]

25b. You told me what you would do, but you didn't mention reporting it to the authorities. What are the reasons why you wouldn't report it to the authorities? [DON'T READ RESPONSE CATEGORIES. CHECK ALL BOXES THAT APPLY. IF OTHER REASON GIVEN, RECORD VERBATIM.] PROBE: "Are there any other reasons?"

NOTHING COULD BE DONE: LACK OF PROOF/NO EVIDENCE .....☐ *136*
WASN'T IMPORTANT ENOUGH/NO HARM DONE .....☐ *137*
POLICE WOULDN'T WANT TO BE BOTHERED/POLICE WOULDN'T CARE OR DO ANYTHING .....☐ *138*
DIDN'T WANT TO TAKE THE TIME/TOO MUCH TROUBLE/RED TAPE .....☐ *139*
WAS A PRIVATE/PERSONAL MATTER .....☐ *140*
DIDN'T WANT TO GET INVOLVED .....☐ *141*
AFRAID OF REPRISAL/MIGHT CAUSE TROUBLE .....☐ *142*
OTHER [SPECIFY _____].....☐ *143*
DON'T KNOW .....☐

SKIP TO Q.26a

25c. Who would you report it to? [DON'T READ RESPONSE CATEGORIES. CHECK ALL BOXES THAT APPLY.] PROBE: "What else?"

CITY POLICE ..... ☐	144
HOUSING AUTHORITY POLICE/SECURITY GUARDS ..... ☐	145
THE MANAGER ..... ☐	146
ANTI-CRIME OFFICE ..... ☐	147
OTHER [SPECIFY _____]. . ☐	148

26a. If you saw someone being beaten up outside your home and calling for help, what would you do? [DON'T READ ANSWER CATEGORIES, CHECK ALL THAT APPLY.] PROBE: "What else would you do?"

DO NOTHING ..... ☐	149
TRY TO DO SOMETHING MYSELF ..... ☐	150
TRY TO GET MY NEIGHBORS INVOLVED ..... ☐	151
REPORT IT TO THE AUTHORITIES ..... ☐	152
OTHER [SPECIFY _____]. . ☐	153
DON'T KNOW ..... ☐	

BOX D

INTERVIEWER: REFER TO Q.26a AND CIRCLE ONE:
R WILL REPORT THE CRIME .....1[SKIP TO Q.26c]
R WILL NOT REPORT THE CRIME.....2[ASK Q.26b]

26b. You told me what you would do, but you didn't mention reporting it to the authorities. What are the reasons why you wouldn't report it to the authorities? [DON'T READ RESPONSE CATEGORIES. CHECK ALL BOXES THAT APPLY. IF OTHER REASON GIVEN, RECORD VERBATIM.] PROBE: "Are there any other reasons?"

NOTHING COULD BE DONE; LACK OF PROOF/NO EVIDENCE ..... ☐	154
WASN'T IMPORTANT ENOUGH/NO HARM DONE ..... ☐	155
POLICE WOULDN'T WANT TO BE BOTHERED/POLICE WOULDN'T CARE OR DO ANYTHING ..... ☐	156
DIDN'T WANT TO TAKE THE TIME/TOO MUCH TROUBLE/RED TAPE ..... ☐	157
WAS A PRIVATE/PERSONAL MATTER ..... ☐	158
DIDN'T WANT TO GET INVOLVED ..... ☐	159
AFRAID OF REPRISAL/MIGHT CAUSE TROUBLE ..... ☐	160
OTHER [SPECIFY _____]. . ☐	161
DON'T KNOW ..... ☐	

SKIP TO Q.27a

26c. Who would you report it to? [DON'T READ RESPONSE CATEGORIES. CHECK ALL BOXES THAT APPLY.] PROBE: "Who else would you report it to?"

CITY POLICE ..... ☐	162
HOUSING AUTHORITY POLICE/SECURITY GUARDS ..... ☐	163
THE MANAGER ..... ☐	164
ANTI-CRIME OFFICE ..... ☐	165
OTHER [SPECIFY _____]. . ☐	166

27a. If you came home and found that your home had been broken into and some valuable things were taken, what would you do? [DON'T READ ANSWER CATEGORIES. CHECK ALL BOXES THAT APPLY.] PROBE: "What else would you do?"

DO NOTHING ..... ☐	167
TRY TO DO SOMETHING MYSELF ..... ☐	168
TRY TO GET MY NEIGHBORS INVOLVED ..... ☐	169
REPORT IT TO THE AUTHORITIES ..... ☐	170
OTHER [SPECIFY _____]..☐	171
DON'T KNOW ..... ☐	

BOX E

INTERVIEWER: REFER TO Q. 27a AND CIRCLE ONE:
R WILL REPORT CRIME .....1[SKIP TO Q.27c]
R WILL NOT REPORT CRIME .....2[ASK Q.27b]

27b. You told my what you would do, but you didn't mention reporting it to the authorities. What are the reasons why you wouldn't report it to the authorities? [DON'T READ RESPONSE CATEGORIES. CHECK ALL BOXES THAT APPLY. IF OTHER REASON GIVEN, RECORD VERBATIM.] PROBE: "Are there any other reasons?"

NOTHING COULD BE DONE; LACK OF PROOF/NO EVIDENCE..... ☐	172
WASN'T IMPORTANT ENOUGH/NO HARM DONE..... ☐	173
POLICE WOULDN'T WANT TO BE BOTHERED/POLICE WOULDN'T CARE OR DO ANYTHING ..... ☐	174
DIDN'T WANT TO TAKE THE TIME/TOO MUCH TROUBLE/RED TAPE ..... ☐	175
WAS A PRIVATE/PERSONAL MATTER ..... ☐	176
DIDN'T WANT TO GET INVOLVED ..... ☐	177
AFRAID OF REPRISAL/MIGHT CAUSE TROUBLE ..... ☐	178
OTHER [SPECIFY _____]..☐	179
DON'T KNOW ..... ☐	

SKIP TO Q.28

27c. Who would you report it to? [DON'T READ RESPONSE CATEGORIES. CHECK ALL BOXES THAT APPLY.] PROBE: "Who else would you report it to?"

CITY POLICE ..... ☐	180
HOUSING AUTHORITY POLICE/SECURITY GUARDS ..... ☐	181
THE MANAGER ..... ☐	182
ANTI-CRIME OFFICE..... ☐	183
OTHER [SPECIFY _____]..☐	184
DON'T KNOW ..... ☐	

28. Now, the next series of questions are about some of the different things that public housing projects around the country are doing in their neighborhood to help reduce crime. I'd like to ask you about what's being done here?

a. Have you heard of the following things taking place or being done at (NAME) in the past year?	[ASK OF ALL "YES" RESPONSES TO Q.28a] b. Do you think this has reduced the crime problem?			[ASK OF ALL "YES" RESPONSES TO Q.28a] c. Did you or anyone in your family participate?			[ASK OF ALL "NO" RESPONSES TO Q.28c] d. Why not?	
	YES	NO	DK/NA	YES	NO	DK		
1. crime prevention meetings/workshops?	1	2	8	1	2	8	_____	195-199
2. a victim/witness program?	1	2	8	1	2	8	_____	190-194
3. adult residents patrolling around the area?	1	2	8	1	2	8	_____	195-199
4. residents watching each others' apartments?	1	2	8	1	2	8	_____	200-204
5. an escort program?	1	2	8	1	2	8	_____	205-209
6. an alcohol or drug abuse program?	1	2	8	1	2	8	_____	210-214
7. a youth work program?	1	2	8	1	2	8	_____	215-219
8. a neighborhood watch program?	1	2	8	1	2	8	_____	220-224
9. a program to improve the education of the youth around here?	1	2	8	1	2	8	_____	225-229
10. any other youth program?	1	2	8	1	2	8	_____	230-234
11. a program to engrave peoples' valuables/Operation ID?	1	2	8	1	2	8	_____	235-239
12. hiring security/lobby guards	1	2	8	1	2	8	_____	240-244
13. installing new lights?	1	2	8	1	2	8	_____	245-249
14. any other anti-crime effort? [SPECIFY _____ _____ _____]	1	2	8	1	2	8	_____	250-254

29a. Are you aware of management installing new locks, doors, windows or window screens on homes in (NAME)?

YES .....1[ASK Q.29b]
NO .....2[SKIP TO VICTIMIZATION SURVEY] 255

29b. Have any of these been done to your home?

YES 1 256
NO 2
DON'T KNOW 8

I.D. #:_____

OMB NO.:
EXPIRES:

CITIZEN'S VICTIMIZATION SURVEY

V1. Now, I'd like to ask if you know of anyone other than yourself who has been the victim of a crime since Easter of 1980.

Since Easter of 1980, do you know anyone who...	V2. [FOLLOW UP EACH "YES" TO V1] Did this happen to someone who lives in your home?			V3. [FOLLOW UP EACH "YES" TO V1] Did this happen in your home, in (*NAME/this neighborhood*) or somewhere else outside (*NAME/this neighborhood*)?					
	YES	NO	DK	YES	NO	R'S HOME	PROJECT/ NEIGHBOR-HOOD	OUTSIDE PROJECT/ NEIGHBOR-HOOD	DK
a. Had someone take something from them by force, or had someone try but fail to take something from them?	1	2	8	1	2	3	2	1	8
b. Was beaten up, or had someone try to beat them up?	1	2	8	1	2	3	2	1	8
c. Had their home broken into, or had someone try to break in?	1	2	8	1	2	3	2	1	8
d. Had their car stolen or had someone try to steal it?	1	2	8	1	2	3	2	1	8
e. Was raped, or had someone try to rape them?	1	2	8	1	2	3	2	1	8
f. Had someone damage or try to damage their home?	1	2	8	1	2	3	2	1	8

The next series of questions are about some things which might have happened to you personally since Easter of 1980. As I read the list, please think carefully about each one and tell me if anything of that kind did happen since Easter of 1980. If you remember something which happened which might fit the description I read, let me know. It doesn't matter who else was involved, or whether you think it was serious or not.

V4. Since Easter of 1980...

	NO	YES	IF "YES" NUMBER OF TIMES	
[ASK "a" AND "b" ONLY OF FEMALE RESPONDENTS] a. Have you been raped?	2	1	_____	275-277
b. (Other than the incident(s) just mentioned), has anyone tried to rape you?	2	1	_____	278-280
c. Have you received any threatening or obscene phone calls?	2	1	_____	281-283
d. Has anyone physically attacked you?	2	1	_____	284-286
e. (Other than the incident(s) just mentioned), has anyone threatened or tried to hurt you even though they did not actually hurt you?	2	1	_____	287- 289
f. Has anyone taken something directly from you by force or through threat?	2	1	_____	290-292
g. (Other than the incident(s) just mentioned), has anyone tried to take something from you by force even though they did not get it? ..	2	1	_____	293-295
h. Has anyone picked your pocket or taken a bag, purse, or package directly from you without using force or threat of force?	2	1	_____	296-298
i. (Other than that), has anyone tried to take something from you without force?	2	1	_____	299-301
j. Has anyone broken into your home to steal something?	2	1	_____	302-304
k. (Other than the incident(s) just mentioned), has anyone tried to break in or get in without your permission?	2	1	_____	305-307
l. Have you had anything taken from inside your home even though no one broke in?	2	1	_____	308-310
m. Have you had anything taken that you left outside of your home?	2	1	_____	311-313
n. Did anyone deliberately damage your home? ..	2	1	_____	314-316
o. Have you owned a car since Easter of 1980? .	2	1	_____	317

BOX F

INTERVIEWER: REFER TO Q.o AND CIRCLE ONE:
R DID NOT OWN A CAR.....1[SKIP TO BOX 9]
R OWNED A CAR.....2[ASK Q.p]

V4. Since Easter of 1980...

	NO	YES	IF "YES" NUMBER OF TIMES	
p. Did anyone steal your car when it was parked here?	2	1	_____	318-319
q. Did anyone take anything from your car when it was parked here?	2	1	_____	320-321
r. Did anyone deliberately damage your car while it was parked here?	2	1	_____	322-323

BOX G

INTERVIEWER: REFER TO QUESTIONS ON PERSONAL VICTIMIZATION AND CIRCLE ONE:

R HAS BEEN A VICTIM OF CRIME.....1[FILL OUT INCIDENT REPORT]

R HAS NOT BEEN A VICTIM OF CRIME...2[GO TO DEMOGRAPHICS]

I.D.#:_____

DEMOGRAPHIC

V5a. Now, (other than all the things you have already mentioned), has anything else happened to you since Easter of 1980 which you thought was a crime?

YES 1
NO .....2[SKIP TO Q.D1] *542*

V5b. What happened?

_____ *543-546*

_____

_____

Finally, I would like to ask you some questions about yourself.

D1. How old are you?

YEARS _____ *547-548*

D2. Are you currently...

Married 1
Living with someone 2
Widowed 3
Separated 4
Divorced or, ...5
Never been married 6 *549*

D3. What is your current employment situation?

WORKING FULL TIME OUTSIDE THE HOUSE 1
WORKING PART TIME OUTSIDE THE HOUSE 2
UNEMPLOYED 3
RETIRED 4
DISABLED 5
OTHER [SPECIFY _____]..6 *550*

D4. How many bedrooms does your home have?

_____ BEDROOMS *551*

D5. How many entrances does your home have?

_____ ENTRANCES *552*

D6. What is the highest grade or year of school you have completed?

0-4 YEARS 01
5-8 YEARS 02
SOME HIGH SCHOOL 03
TECHNICAL SCHOOL INSTEAD OF HIGH SCHOOL 04
COMPLETED HIGH SCHOOL (12 YEARS).05
POST HIGH SCHOOL, BUSINESS OR TRADE SCHOOL 06
1-3 YEARS OF COLLEGE 07
COMPLETED COLLEGE 08
SOME GRADUATE SCHOOL 09
ADVANCED DEGREE 10 *553*

D7. [ANSWER BY OBSERVATION, ONLY IF OBVIOUS. IF NOT ASK:]
What is your racial-ethnic background? Are you...

White 1
Black 2
Hispanic 3
Asian/Pacific Islander 4
American Indian/Alaskan Native ..5
[SPECIFY _____] *554*

Now, in case my office wants to call to be sure that I did, in fact, conduct this interview with the right person, may I please have a telephone number by which you could be reached.

Telephone #:_____1 *555*

No Telephone 2

Refused 9

That completes the interview. Thank you very much for your cooperation. You have been very helpful.

INTERVIEWER OBSERVATION AND REMARKS
FILL OUT THIS SECTION AFTER YOU LEAVE THE HOUSEHOLD

D8. Respondent is:

MALE 1
FEMALE 2 *556*

D9. On which floor does the respondent live?

FLOOR _____

D10. How suspicious was the one who let you into the home? Was the one...

Very suspicious 1
Suspicious, or 2
Not at all suspicious 3
DON'T KNOW 8 *557*

D11. Was the door to the home secured when you knocked?

YES 1
NO 2
DON'T KNOW 3 *558*

D12. How many other apartments are there on this floor?

NUMBER _____ *560-561*

D13. How easy would it be for someone to get into the (apartment/home) through the window? Would you say...

Very easy 4
Easy 3
Difficult, or 2
Very difficult? 1 *562*

D14. Please describe anything else about the interview that you would like us to know.

_____ *563-566*

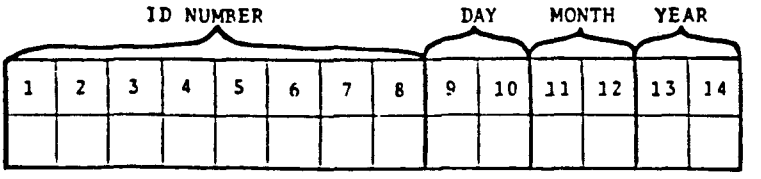
_____

_____

_____

APPENDIX B

OMB NO.: 2528-0090
EXPIRES: SEPTEMBER, 1982



CITIZENS' VICTIMIZATION SURVEY

Respondent lives in...(CIRCLE APPROPRIATE CATEGORY BELOW.)

15- 1 Demonstration Project
2 Surrounding area of Demonstration Project
3 Comparison Project
4 Surrounding area of Comparison Project

16-Type of Interview Personal...1 Telephone...2

17-Number of persons listed_____

18-Selection table assigned_____

19-Number of incident reports completed_____

INTRODUCTION AND RESPONDENT SELECTION

Hello, my name is _____ and I work for DAMANS and Associates, a national research company in the Washington, D.C., Metropolitan Area. [SHOW I.D. CARD.] We are doing a study to find out how people feel about their neighborhood and I would like to talk with you for a few minutes. All the information you give will be kept strictly confidential and it will be used only to prepare a report in which no one's answers will ever be identified except as may be required by law. Your participation is voluntary but your cooperation is valuable.

To be sure that we have a good idea of the opinions of everyone in this area, I have been given a very strict method of selecting the person I talk with in any home. First, please tell me how many people 16 years old or older (*live here/are listed on the lease*)? Starting with the oldest male, please tell me the first name and age of all the males. Then, please do the same for the name and age of the females.

[LIST THE FIRST NAME, SEX AND AGE OF ALL PERSONS 16 YEARS OLD AND OLDER WHO LIVE IN THIS HOUSEHOLD IN THE TABLE BELOW. ASSIGN THE NUMBER "1" TO THE OLDEST MALE, "2" TO THE SECOND OLDEST MALE, ETC. THEN ASSIGN CONTINUOUS NUMBERS TO THE FEMALES. LOOK AT THE SELECTION TABLE TO FIND OUT WHO IS TO BE INTERVIEWED.]

Okay, according to my instructions, I am supposed to talk to _____.

[IF SELECTED RESPONDENT IS OTHER THAN THE FIRST PERSON CONTACTED, MAKE ARRANGEMENTS TO INTERVIEW THE PERSON SELECTED.]

List all persons 16 and over. List all males first, starting with the oldest. Then list all females.	Sex	Age	Assigned Number	Indicate Respondent with check

These first few questions are about you and your neighborhood.

1a. **First, how long have you lived in (*NAME/this neighborhood*)?**

_____ **YEARS** _____ **MONTHS** *20-23*

BOX A

INTERVIEWER: CIRCLE ONE
R LIVES IN HOUSING PROJECT.....1[SKIP TO Q.2]
R LIVES IN SURROUNDING AREA.....2[ASK Q.1b]

1b. Do you own or rent your home?

OWN 1
RENT 2
DON'T KNOW 8 *24*

2. Do you think this is a better or a worse place to live than since Easter of 1980? Would you say ...

Much better 5
Slightly better 4
About the same 3
Slightly worse, or.....2
Much worse? 1
DON'T KNOW 8
NA (RESIDENT LESS THAN ONE YEAR) 9 *25*

3. Some people feel their neighborhood is a real home to them. Other people think of their neighborhood as just a place where they happen to be living. Which of these comes closest to the way you feel. Do you feel this is a...

Real home, or 1
Just a place to live? 2
DON'T KNOW 8 *26*

4. In some neighborhoods, people do things together and help each other. In other neighborhoods, people mostly stick to themselves and go their own way. What about (*NAME/this neighborhood*), would you say it's a place where people...

Help each other, or 1
Go their own way? 2
DON'T KNOW 8 *27*

5. How good a job do you think the city police do in providing protection to the residents in (*NAME/this neighborhood*)? Do they do a...

Good job 3
Fair job, or 2
Poor job? 1
DK/NA 8 *28*

6. What kind of treatment do you think the city police give to residents here in (*NAME/this neighborhood*)? Would you say they treat them...

Very good 4
Good 3
Bad, or 2
Very bad 1
DON'T KNOW 8 *29*

7. Now thinking of crime in (*NAME/this neighborhood*), do you believe that the amount of crime here is...

A very big problem 4
A big problem 3
A small problem, or 2
No problem at all? 1
DON'T KNOW 8 *30*

8. Compared to Easter of 1980, do you think crime here is...

Much less of a problem 5
Less of a problem 4
About the same 3
More of a problem, or 2
Much more of a problem? ...1
DON'T KNOW 8
NA (RESIDENT LESS THAN ONE YEAR).....9 *31*

9. In general, how safe do you feel here? Would you say you feel...

Very safe 4
Safe 3
Unsafe, or 2
Very unsafe? 1
DON'T KNOW 8 *32*

10. Would you be afraid if a stranger stopped you at night outside your home to ask for directions?

YES 1
NO 2 *33*

11. Do you feel uneasy when you hear footsteps behind you at night?

YES 1
NO 2

12. Do you get nervous when someone knocks at your door when you are not expecting anyone?

YES 1
NO 2 *34*

13. Do you get suspicious when you see people around here that you do not know?

YES 1
NO 2 *35*

14. How much do you like living in (*NAME/this neighborhood*)? Do you...

Like it very much 4
Like it 3
Dislike it, or 2
Dislike it very much? 1
DON'T KNOW 8 *36*

15. Would you recommend (*NAME/this neighborhood*) to any of your friends if they were looking for a place to live?

YES 3
MAYBE 2
NO 1
DON'T KNOW 8 *37*

16. In general, how easy or difficult is it for you to tell someone who does <u>not</u> live or work here from someone who <u>does</u>? Would you say it's...

Very easy 4
Easy 3
Difficult, or 2
Very difficult? 1
DON'T KNOW 8 *38*

17a. Now, how worried are you that someone will try to harm you in (*NAME/this neighborhood*)? Would you say you are...

Very worried 3
Somewhat worried, or 2
Not worried at all? 1
DON'T KNOW/NA 8 *39*

17b. How worried are you that someone will take something from you here in (*NAME/this neighborhood*)? Would you say you are...

Very worried 3
Somewhat worried, or 2
Not worried at all? 1
DON'T KNOW/NA 8 *40*

17c. How worried are you that someone will try to break into your home?

Very worried 3
Somewhat worried, or 2
Not worried at all? 1
DON'T KNOW/NA 8 *41*

17d. How worried are you that someone will try to steal or damage your car here in (*NAME/this neighborhood*)? Would you say you are...

Very worried 3
Somewhat worried, or 2
Not worried at all? 1
DON'T KNOW/NA 8 *42*

V1. Now, I'd like to ask if you know of anyone other than yourself who has been the victim of a crime since Easter of 1980.

Since Easter of 1980, do you know anyone who...	V2. [FOLLOW UP EACH "YES" TO V1] Did this happen to someone who lives in your home?			V3. [FOLLOW UP EACH "YES" TO V1] Did this happen in your home, in (*NAME/this neighborhood*) or somewhere else outside (*NAME/this neighborhood*)?					
	YES	NO	DK	YES	NO	R'S HOME	PROJECT/ NEIGHBOR-HOOD	OUTSIDE PROJECT/ NEIGHBOR-HOOD	DK
a. Had someone take something from them by force, or had someone try but fail to take something from them?	1	2	8	1	2	3	2	1	8
b. Was beaten up, or had someone try to beat them up?	1	2	8	1	2	3	2	1	8
c. Had their home broken into, or had someone try to break in?	1	2	8	1	2	3	2	1	8
d. Had their car stolen or had someone try to steal it?	1	2	8	1	2	3	2	1	8
e. Was raped, or had someone try to rape them?	1	2	8	1	2	3	2	1	8
f. Had someone damage or try to damage their home?	1	2	8	1	2	3	2	1	8

The next series of questions are about some things which might have happened to you personally since Easter of 1980. As I read the list, please think carefully about each one and tell me if anything of that kind did happen since Easter of 1980. If you remember something which happened which might fit the description I read, let me know. It doesn't matter who else was involved, or whether you think it was serious or not.

V4. Since Easter of 1980...

	NO	YES	IF "YES" NUMBER OF TIMES	
[ASK "a" AND "b" ONLY OF FEMALE RESPONDENTS] a. Have you been raped?	2	1	_____	275-277
b. (Other than the incident(s) just mentioned), has anyone tried to rape you?	2	1	_____	278-280
c. Have you received any threatening or obscene phone calls?	2	1	_____	281-283
d. Has anyone physically attacked you?	2	1	_____	284-286
e. (Other than the incident(s) just mentioned), has anyone threatened or tried to hurt you even though they did not actually hurt you?	2	1	_____	287- 289
f. Has anyone taken something directly from you by force or through threat?	2	1	_____	290-292
g. (Other than the incident(s) just mentioned), has anyone tried to take something from you by force even though they did not get it? ..	2	1	_____	293-295
h. Has anyone picked your pocket or taken a bag, purse, or package directly from you without using force or threat of force?	2	1	_____	296-298
i. (Other than that), has anyone tried to take something from you without force?	2	1	_____	299-301
j. Has anyone broken into your home to steal something?	2	1	_____	302-304
k. (Other than the incident(s) just mentioned), has anyone tried to break in or get in without your permission?	2	1	_____	305-307
l. Have you had anything taken from inside your home even though no one broke in?	2	1	_____	308-310
m. Have you had anything taken that you left outside of your home?	2	1	_____	311-313
n. Did anyone deliberately damage your home? ..	2	1	_____	314-316
o. Have you owned a car since Easter of 1980? .	2	1	_____	317

BOX F

INTERVIEWER: REFER TO Q.o AND CIRCLE ONE:
R DID NOT OWN A CAR.....1[SKIP TO BOX 9]
R OWNED A CAR.....2[ASK Q.p]

V4. Since Easter of 1980...

		NO	YES	IF "YES" NUMBER OF TIMES	
p.	Did anyone steal your car when it was parked here?	2	1	_____	*318-319*
q.	Did anyone take anything from your car when it was parked here?	2	1	_____	*320-321*
r.	Did anyone deliberately damage your car while it was parked here?	2	1	_____	*322-323*

BOX G

INTERVIEWER: REFER TO QUESTIONS ON PERSONAL VICTIMIZATION AND CIRCLE ONE:

R HAS BEEN A VICTIM OF CRIME.....1[FILL OUT INCIDENT REPORT]

R HAS NOT BEEN A VICTIM OF CRIME...2[GO TO DEMOGRAPHICS]

I.D.#:_____

DEMOGRAPHIC

V5a. Now, (other than all the things you have already mentioned), has anything else happened to you since Easter of 1980 which you thought was a crime?

YES 1
NO .....2[SKIP TO Q.D1] *542*

V5b. What happened?

_____ *543-546*

_____

_____

Finally, I would like to ask you some questions about yourself.

D1. How old are you?

YEARS _____ *547-548*

D2. Are you currently...

Married 1
Living with someone 2
Widowed 3
Separated 4
Divorced or, ...5
Never been married 6 *549*

D3. What is your current employment situation?

WORKING FULL TIME OUTSIDE THE HOUSE 1
WORKING PART TIME OUTSIDE THE HOUSE 2
UNEMPLOYED 3
RETIRED 4
DISABLED 5
OTHER [SPECIFY _____]..6 *550*

D4. How many bedrooms does your home have?

_____ BEDROOMS *551*

D5. How many entrances does your home have?

_____ ENTRANCES *552*

D6. What is the highest grade or year of school you have completed?

0-4 YEARS 01
5-8 YEARS 02
SOME HIGH SCHOOL 03
TECHNICAL SCHOOL INSTEAD OF HIGH SCHOOL 04
COMPLETED HIGH SCHOOL (12 YEARS).05
POST HIGH SCHOOL, BUSINESS OR TRADE SCHOOL 06
1-3 YEARS OF COLLEGE 07
COMPLETED COLLEGE 08
SOME GRADUATE SCHOOL 09
ADVANCED DEGREE 10 *553*

D7. [ANSWER BY OBSERVATION, ONLY IF OBVIOUS. IF NOT ASK:] What is your racial-ethnic background? Are you...

White 1
Black 2
Hispanic 3
Asian/Pacific Islander 4
American Indian/Alaskan Native ..5
[SPECIFY _____] *554*

Now, in case my office wants to call to be sure that I did, in fact, conduct this interview with the right person, may I please have a telephone number by which you could be reached.

Telephone #:_____1 *555*

No Telephone 2

Refused 9

That completes the interview. Thank you very much for your cooperation. You have been very helpful.

INTERVIEWER OBSERVATION AND REMARKS
FILL OUT THIS SECTION AFTER YOU LEAVE THE HOUSEHOLD

D8. Respondent is:

MALE 1
FEMALE 2 *556*

D9. On which floor does the respondent live?

FLOOR _____

D10. How suspicious was the one who let you into the home? Was the one...

Very suspicious 1
Suspicious, or 2
Not at all suspicious 3
DON'T KNOW 8 *557*

D11. Was the door to the home secured when you knocked?

YES 1
NO 2
DON'T KNOW 3 *558*

D12. How many other apartments are there on this floor?

NUMBER _____ *560-561*

D13. How easy would it be for someone to get into the (apartment/home) through the window? Would you say...

Very easy 4
Easy 3
Difficult, or 2
Very difficult? 1 *562*

D14. Please describe anything else about the interview that you would like us to know.

_____ *563-566*

_____

_____

_____

APPENDIX C

PUBLIC HOUSING PROJECTS SAMPLED

Baltimore

- Lafayette Courts
- Flag House Courts

Charlotte

- Fairview Homes
- Piedmont Courts

Chicago

- Robert Taylor Homes
- Stateway Gardens

Cleveland

- Riverview Estates
- Lakeview Estates
- Cedar Apartments

Dade County

- Larchmont Gardens
- Little River Terrace

Hampton

- Pine Chapel Village

Hartford

- Nelton Court
- Bellevue Square
- Stowe Village

Jackson

- Lincoln Courts/Lincoln Circle
- Parkview Courts
- Rosewood Gardens
- Edgewood Towers
- Washington-Douglas Courts
- Neff Circle

Jackson (cont.)

Merry Lane Courts
Allenton Heights
Allenton Annex

Jersey City

A. Harry Moore
Marion Gardens

Louisville

Clarksdale
Dosker Manor

Oxnard

Colonia Village

San Antonio

Cassiano Homes
San Juan Homes

Seattle

Rainier Vista
Holly Park
High Point

Tampa

Ponce de Leon Courts
College Hill Homes
Robles Park

Toledo

Port Lawrence Homes
Brand Whitlock Homes
Brand Whitlock Homes Extension
McClinton Nunn Homes
Albertus Brown Homes

APPENDIX D

RESPONSE FREQUENCIES AND ITEM INTERRELATIONSHIPS

Fear of Crime in Public Housing

In general, how safe do you feel here? Would you say you feel . . .

Very safe,	23%
Safe,	54%
Unsafe, or	17%
Very unsafe?	6%

How worried are you that . . .	Not Worried At All	Somewhat Worried	Very Worried
Someone will try to harm you in (PROJECT NAME)?	58%	29%	13%
Someone will take something from you here in (PROJECT NAME)?	53%	30%	17%
Someone will try to break into your home?	50%	29%	21%

Interrelationships Among Fear Items*

	Feelings of Safety	Worry about Harm	Worry about Robbery	Worry about Burglary
Feelings of Safety	-			
Worry about Harm	.45	-		
Worry about Robbery	.41	.70	-	
Worry about Burglary	.43	.64	.74	-

*All r, p .001.

Judged Severity of the On-Site Crime Problem

Now thinking of crime in (PROJECT NAME), do you believe that the amount of crime here is . . .

A very big problem,	17%
A big problem,	28%
A small problem, or	37%
No problem at all?	18%

Now, I'd like you to tell me whether each of the following is a . . .

	Big Problem	Some Problem	Not a[a] Problem
People being mugged	18%	24%	58%
Rape or other sexual attacks	6%	11%	83%
People being robbed or having their purses or wallets taken	20%	20%	60%
People breaking in or sneaking into homes to steal something	21%	25%	54%

[a]Asked only of respondents of long-form questionnaire.

Interrelationships Among Judgments of Severity:
On-Site Crime Problem

	Crime in General	Assaults	Rape	Robbery	Burglary
Crime in General	-				
Assaults	.52	-			
Rape	.41	.44	-		
Robbery	.50	.62	.36	-	
Burglary	.45	.46	.52	.53	-

Note. Item responses to long-form survey only; all r, p .001.

Recent Personal and Property Crime Victimization
On-Site in Public Housing

	Percentage of Elderly Residents Who Reported Being Victimized On-Site Within Past Year
Personal Crime	10.4
Threatening & Obscene Phone Calls	8.1
Pursesnatch & Attempts	1.2
Robbery & Attempts	.8
Assaults & Threats	1.4
Rape & Attempts	.1
Property Crime	12.4
Thefts	5.2
Vandalism	1.7
Burglary & Attempts	4.6
Auto-related Thefts & Vandalism	3.4

Judged Severity of On-Site Incivilities

	Big Problem	Some Problem	Not a Problem
Neighbors fighting with each other	13%	15%	72%
People drinking too much	24%	16%	60%
Neighbors being too nosy	10%	10%	80%
People using drugs or other things to get "high"	22%	15%	63%
People who say insulting things or both people as they walk by	9%	14%	77%
People leaving garbage or trash lying around	25%	20%	55%
People selling drugs	18%	10%	72%
People being too suspicious of each other	9%	16%	75%
Groups of teenagers hanging around and causing trouble	25%	18%	57%
Vandalism	23%	18%	59%
People beating their children	3%	6%	91%
Neighbors who make too much noise	15%	11%	74%
People living in (PROJECT NAME) who are not on the lease	11%	9%	80%

Note. Items were asked of long-form respondents only.

Interrelationships Among Judgments of Severity: On-Site Incivilities

		I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	XIII
I	Fighting Neighbors	-												
II	Alcohol Use	.46	-											
III	Nosy Neighbors	.41	.37	-										
IV	Drug Use	.55	.69	.38	-									
V	Harassment	.44	.49	.38	.60	-								
VI	Trash/Garbage	.43	.48	.30	.59	.47	-							
VII	Drug Sales	.51	.63	.46	.86	.62	.58	-						
VIII	Suspiciousness	.36	.43	.41	.53	.54	.37	.52	-					
IX	Teenage Loitering	.44	.49	.26	.54	.53	.50	.57	.46	-				
X	Vandalism	.43	.47	.30	.60	.47	.52	.61	.48	.57	-			
XI	Child Abuse	.22	.30	.26	.39	.34	.32	.35	.40	.34	.21	-		
XII	Noisy Neighbors	.53	.51	.38	.59	.55	.51	.56	.38	.47	.50	.32	-	
XIII	Nonleased Tenants	.43	.52	.29	.64	.38	.42	.61	.37	.43	.50	.32	.50	-

Note. All r, $p < .001$.

Interrelationships Among Visiting Items

	Visited Other Residents	Visited by Other Residents	Conversations with Residents
Visited Other Residents	-		
Visited by Other Residents	.44	-	
Conversations with Residents	.26	.26	-

Note. Items were asked of long-form respondents only. All r, $p < .001$.

APPROVAL SHEET

The dissertation submitted by Janice Normoyle has been read and approved by the following committee:

Dr. Jeanne M. Foley, Director
Professor, Psychology, Loyola University of Chicago

Dr. Jill Reich
Associate Professor, Psychology, Loyola of Chicago

Dr. Fred Bryant
Assistant Professor, Psychology, Loyola of Chicago

Dr. Paul J. Lavrakas
Assistant Professor, The Medill School of Journalism,
Northwestern University

The final copies have been examined by the director of the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

April 4, 1984 — Jeanne M. Foley
Date — Director's Signature