

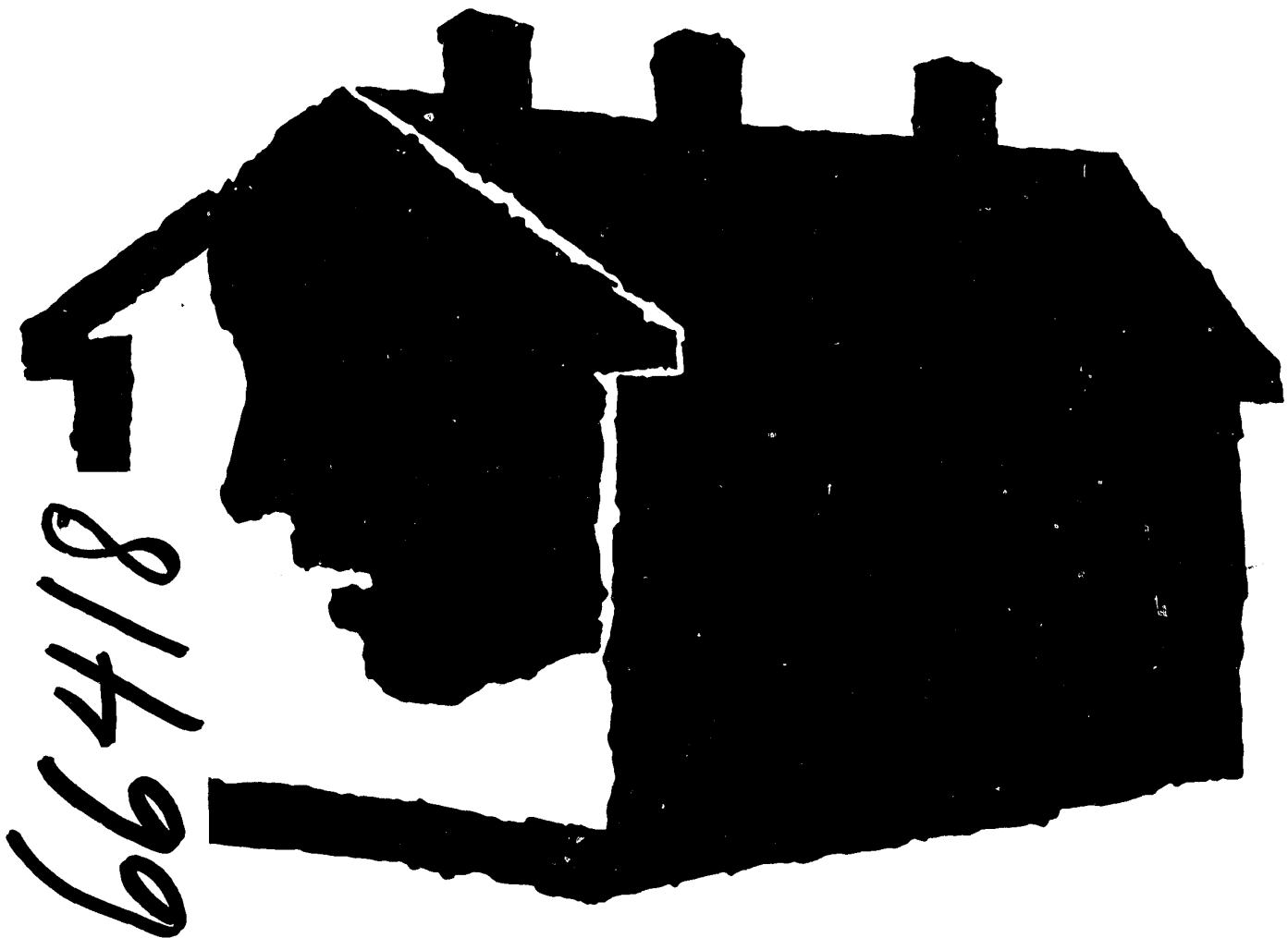
U.S. Department of Housing and Urban Development
Office of Policy Development and Research



Crime in Public Housing

A Review of Major Issues and
Selected Crime Reduction Strategies

Volume I: A Report



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Selected Crime Reduction Strategies

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Prepared for the
Department of Housing and Urban Development
Office of Policy Development and Research
Washington, D.C.

Contract No. H-2855

December 1978

American Institutes for Research

NCJRS

MAR 27 1980

ACQUISITIONS

The research and publication of this report were made possible through a research contract from the Office of Policy Development and Research of the U.S. Department of Housing and Urban Development. The findings presented in this report are those of the American Institutes for Research and do not represent those of the United States Government in general or HUD in particular.

FOREWORD

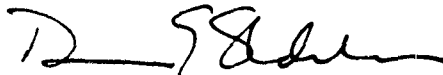
The two volumes of Crime and Public Housing have a single objective: to contribute to the available information on ways to reduce crime, and the fear of crime, in and around public housing complexes.

For the general public, and for those whose lives are involved with public housing, the subject of crime is laden with emotion and, often, misinformation. These volumes approach the subject objectively. They provide, perhaps for the first time, a comprehensive view of what we have learned about the subject since 1961 when Elizabeth Wood and, a few months later Jane Jacobs published their insights into the relationship between crime and the physical environment.

Over the eighteen years that separate their landmark work from the present, many others have concerned themselves with the subject of public housing and crime. These volumes review that literature and provide an extensive annotated bibliography of considerable value to those who plan, implement, and evaluate crime-reduction programs.

In addition to assessing five crime-reduction strategies currently in use, the volumes also summarize two anti-crime conferences funded by HUD in 1978. The ideas generated are important. I am glad to share them with you.

Richard Burk of the Housing Management Group supervised the study, and Dr. Peggy Lentz contributed importantly to the draft report. Acknowledgements are also due to Lynn Curtis of the Office of Housing and to the many people who attended the HUD-sponsored conferences on crime and public housing in September and October 1968.



Donna E. Shalala
Assistant Secretary for Policy
Development and Research

PREFACE

This report presents a literature review and analysis of crime prevention and control strategies. It is part of an ongoing assessment and policy development process concerned with problems in public housing. These volumes are not intended as a definitive statement on crime reduction strategies but rather as a compilation of recurrent ideas. In commissioning this study, it was our intent to summarize a selection of the available literature and to focus attention on the need for further interest, discussion and work.

The strategies discussed in this report were primarily developed for public housing developments. However, crime does not respect classification's such as "public" or "private" housing. Indeed most urban residents, whether in publicly assisted housing or not, believe that crime is an important problem directly impacting their lives. The approaches reviewed herein are applicable beyond public housing and in some instances were developed in privately owned neighborhoods.

The public housing focus of this study was chosen to allow the analysis to concentrate on a manageable portion of the literature and to address a particular set of strategies that have had some testing within a particular type of housing environment. Also, the study is part of the program and evaluation development leading to the Urban Initiatives Anti-Crime Program in Public Housing.

Volume I contains the primary part of the study, the actual literature review and analysis. Volume II provides a summary of two conferences convened by HUD in the Autumn of 1978 to discuss crime control and prevention. The first conference elicited the opinions of those most directly concerned, public housing residents, managers, social workers and security officers. The second conference engaged experts in crime prevention in extensive debates about what strategies are effective in what circumstances. Volume II also includes an annotated bibliography. By summarizing a larger portion of existing knowledge, these volumes make a significant contribution to our knowledge about community crime prevention. There is no assumption that this report covers all existent work. Nor are the five analyses of particular current approaches intended to be definitive evaluations. It is far too early in the development of community crime prevention and control to be rating the relative effectiveness of these strategies much less to assign ratings.

We truly appreciate the assistance and cooperation offered in the development of this report by the five research groups discussed in the "Five Current Approaches" section. The contributions of the participants in the two conferences are also gratefully acknowledged.

ABSTRACT

The following report was prepared by W. Victor Rouse, Senior Research Fellow and Herb Rubenstein, Research Associate, of the American Institutes for Research under contract with the Office of Policy Development and Research of the U.S. Department of Housing and Urban Development. The report consists of three volumes. The first volume represents a review of the literature addressing the major issues with regard to crime and public housing. This review discusses a broad range of crime reduction approaches currently employed in an attempt to reduce crime and the fear of crime among public housing residents. The second volume contains the summaries of two conferences on crime and public housing held in Washington, D. C. during 1978. In addition, Volume II contains an annotated bibliography of the literature reviewed in Volume I and other related literature. Volume III consists of short papers on (1) a future research strategy, (2) the potential for linking the HUD Anti-Crime Demonstration Program with other government programs, and (3) a discussion of evaluation issues relevant to the Anti-Crime Demonstration Program.

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Executive Summary

The problems related to crime are among the most serious social problems faced by persons who live or work in and around public housing. Recent surveys sponsored by the U. S. Department of Housing and Urban Development (HUD) show that the quality of life of public housing residents is reduced more by crime and the fear of crime than by any other social problem. Studies conducted by Brill (1974-1978) show that the crime rates in various public housing complexes are five--and in some cases ten--times higher than the national average. Studies by Newman (1972-1976) conducted in several cities show that crime rates in areas with publicly assisted housing are higher than crime rates in other areas of these cities.

Fear of crime among public housing residents is a very serious social problem as well. In several public housing complexes studied by Brill, approximately 60 percent of the residents stated that it was *very dangerous* to ride the elevator in their buildings or walk down the hallway at night. Public housing is often a place where doors are always locked and where residents do not feel secure.

This report on *Crime and Public Housing* draws upon information gained from a review of the literature and two conferences sponsored by HUD and held in September and October 1978. This report and the conferences were undertaken to provide HUD with background information to aid in planning the Anti-Crime Demonstration component of the Urban Initiatives Program. The program will get underway during the latter half of FY 1979.

The first conference, held in September 1978 and organized by the National Association of Housing and Redevelopment Officials (NAHRO), brought together residents, management, and security staff from nineteen local Public Housing Authorities. The conference participants discussed the problems of crime in

their residential complexes, outlined the current approaches being employed to reduce crime and the fear of crime, and presented their ideas regarding the approaches they would like to see undertaken in the future. The conference proceedings are summarized in Appendix I of this report.

The second conference, held in October and organized by the American Institutes for Research, brought recognized experts in the field of crime prevention together with researchers and government officials. Participants sought to identify the essential components of an effective crime reduction program and addressed a broad range of planning, implementation, and evaluation issues pertaining to the HUD Anti-Crime Demonstration Program. A summary of the proceedings of the conference appears in Appendix I of this report.

The main body of this report, while incorporating some of the discussion at the two conferences, is primarily a review of the literature that deals with the extent of the crime problems in public housing, the factors suggested as contributors to those crime problems, and the crime prevention approaches that have been undertaken recently in public housing environments and urban neighborhoods.

The literature documenting the problem consists largely of the work of Brill and Newman, papers written by Public Housing Authorities for the September conference, and surveys by Louis Harris. The literature is not well developed either in describing or measuring the extent of crime in public housing environments.

There is a much broader literature to draw upon in analyzing physical, social, and other factors that may be contributing to the problems of crime in public housing. However, this literature neither pinpoints the extent to which each of the factors actually contributes to the crime problem nor

suggests that physical factors--such as lack of surveillance opportunities, locks, and access control--contribute more significantly to the crime problem than social factors--such as the lack of employment opportunities, supervised activities for youth, social cohesion among residents, and inadequate social services. This report discusses six physical factors, six social factors, and several other factors suggested in the literature as contributors to the crime problem. In addition, the report discusses selected government and local public housing management policies that may be contributing to the crime problem.

The second section of the report is titled, "Analyzing Approaches to Crime Prevention." Five particular approaches have been selected for review since they are representative of the crime prevention activities currently undertaken in public housing environments and urban neighborhoods. These approaches have been developed in large part by Newman, Gardiner, Brill, Rosenthal, and the Westinghouse National Issues Center and utilize a broad range of physically and socially oriented crime reduction strategies. Each approach is discussed in terms of several elements--such as its use of data, mapping techniques, and other systematic research methods in analyzing the crime problem; its discussion of the sharing of roles and responsibilities for crime reduction activities among key groups (i.e., residents, security and police staffs, and housing management staffs); and the extent to which it addresses the social and physical factors suggested in the literature as contributors to crime and the fear of crime in public housing.

This report combines the literature on the factors that contribute to crime with the literature on the approaches that are being employed to reduce crime in and around public housing. Local Public Housing Authorities, residents of public housing, and crime prevention professionals may find this report and

the conference summaries helpful in analyzing their crime problems and planning, implementing, and evaluating crime reduction programs. Researchers and government officials may find the report and its annotated bibliography a guide to the literature and a breeding ground for ideas for future research and action programs.

If there is one general idea that emerges from this report and the conference summaries, it is that there are many physical, social, and other factors that contribute to the crime problems in and around public housing. In order for a crime prevention approach to be effective, it must be tailored to the specific problems faced by each public housing complex. Given the knowledge that exists in the field of crime reduction, we are at the stage where pre-designed strategies cannot be taken off of the shelf and expected to work. No crime reduction strategy has been proven to be universally effective in reducing crime in all types of environments. Thus, the literature review and the findings from the two conferences lead to the conclusions that there are two essential elements of a successful crime prevention program: (1) a clear understanding of the problems and (2) a successful implementation of approaches designed specifically to address these problems.

Finally, this report, with its review of the literature and of the conferences, has one major objective--to contribute to the information base decision-makers at the federal and local levels rely upon as they seek ways to reduce crime and the fear of crime in and around public housing. It will help Public Housing Authorities identify some of the crime reduction planning, implementation, and evaluation strategies that will contribute to reducing crime.

INTRODUCTION

Documenting the fact that crime is a national problem is hardly necessary with an audience such as this. Crime statistics, citizens' reported fear of crime, and the altered behavior that this fear engenders point to crime as a pressing problem. Moreover, large proportions of the American public repeatedly report that crime rates in their locales are on the rise. For example, in 1967, 46 percent of the respondents in a Harris Survey felt that crime rates in their areas had been increasing. But 1975, this figure had risen to 70 percent in a similar Harris survey.

The literature on criminal victimization shows that not all segments of the U.S. population are victimized equally. Some groups are more vulnerable than others, with residents of low- and medium-income housing developments being hit the hardest. Numerous studies sponsored by the U.S. Department of Housing and Urban Development (HUD) make this point.

These studies show that while the national average of robberies per thousand persons is approximately 6.5 (LEAA, November, 1977), the number of robberies in selected housing projects ranged from 21.8 in Millvale (Cincinnati) to 114.1 in Murphy Homes (Baltimore) (Brill, 1976). Also, while the national average of assaults per thousand persons is approximately 25.3 (LEAA, November, 1977), in four of the five residential units studied for HUD the number of assaults was over 30 per thousand. In Nickerson Gardens (Los Angeles), the assault rate was 49.8 (Brill, 1976, 1977). These public housing complexes may not be representative of the crime rates for all of public housing. However, there are not sufficient data available from other Public Housing Authorities to present a truly "national picture."

In addition, to judge by the evidence accumulated thus far, nearly half of the households in housing developments report experiencing at least one incident of crime within a one-year period. The Millvale figure was 46 percent and the Nickerson Gardens rate was 56.6 percent (Brill, 1976, 1977).

Fear of crime is also intense in public housing projects. Development residents perceive themselves as likely victims of crime. Over 75 percent of samples of both Millvale and Nickerson Gardens respondents felt that the chance of having their homes broken into while they were away was 50/50 or better (Brill, 1976, 1977). Of the sample of Nickerson Gardens residents, 43.1 percent admitted being "very worried" about their children being beaten in the project. Among the Millvale sample, more than one half expressed worry over their children being beaten going to and from school (Brill, 1976 1977).

In several public housing projects studied by Brill (1974-1978) and in research conducted by Rosenthal (1974), Perlmut (1978), and others, there is evidence that even where the actual incidence of crime is not high, often a great fear of crime disturbs residents. The findings from Brill's study of four public housing complexes in Boston show that approximately 60 percent or more of the residents considered it *very dangerous* to:

- Wait for a bus alone at night (75%)
- Go to shopping areas at night (71%)
- Ride the elevator in their public housing complexes at night (63%)
- Walk down the hallway in their public housing complex at night (59.4%) (Brill, 1975)

In addition, 40 percent of the residents considered it "*very dangerous*" to be alone in their own apartments at night (Brill, 1975).

Fear of crime is a particularly severe problem among one major group of public housing residents--the elderly. Lawton, Nahemove, Yaffe, and Feldman note that among the elderly anxiety about possible victimization affects individuals' abilities to respond effectively. They *feel* more vulnerable and consequently *become* more vulnerable (Lawton et al., 1976). In addition, these authors suggest that fear of victimization may carry over and affect the general feelings of well-being of older people.

Statistics regarding public housing residents' fear of crime show only one dimension of the means by which fear of crime affects residents. An important aspect of this problem is the residents' coping behavior. Brill's surveys in the Boston public housing projects show clearly that due to the fear of crime over 45 percent of the residents:

- Keep their front doors locked at all times (87.2%)
- Do not go out alone at night (63.8%)
- Try to keep their children inside their apartments at night (61.5%)
- Restrict visits at night from residents of the city *and* residents of the public housing project itself (50%)
- Do not shop at night (46.8%)

These findings are supported by Brill's research in other public housing complexes and by many of the papers presented by local housing authorities at the recent NAHRO/HUD

Anti-Crime Conference. In sum, residents are fearful of carrying out a wide variety of activities that are common, everyday occurrences for most Americans. The area in and around public housing often becomes "the territory of those who do not have to be afraid--the criminals, whose safety *is guaranteed* by a high level of fear in the potential victims around them" (Brill, 1975).

Thus, the problems of crime and fear of crime are both very important social problems that reduce the quality of life of public housing authority residents. Both sides of the crime problem must be addressed.

The Literature Review

Having recognized that the problem of crime in public housing is actually two related but distinct problems--actual crime and fear of crime--we reviewed a wide body of literature, including studies based on research in public housing settings and research on crime related problems in other urban but non-public housing settings. The scope of this review included works in such related fields as environmental design, residential security, and juvenile delinquency, as well as studies relating unemployment and social division to crime rates. Although many related works, articles, books, reports, etc., were reviewed, not all of the research relating to crime in general or crime in and around public housing has been incorporated into this report. Rather, we extracted from the literature surveyed those works focusing primarily

on issues that can be addressed and on crime reduction strategies that can be undertaken in some manner by local public housing authorities through the proposed HUD Anti-Crime Demonstration Program.

In reviewing the literature, three categories of the correlates of crime in and around public housing surfaced: physical factors, social factors, and selected policies of the government and of local public housing authority management. The literature, while treating social and physical factors as analytically distinct, also recognizes that the social, physical and other factors combine to form one human environment. The distinction in this report, however, serves an important purpose. By separating the social from the physical and other factors, we have teased out from the literature a broad range of contributing factors and identified a comprehensive list of individual crime reduction strategies employed in public housing and urban neighborhoods.

Our discussion of the literature focuses first on the physical factors, then discusses the social factors most commonly mentioned as contributors to crime, and concludes with a brief analysis of several government and management policies that may affect the level of crime in and around public housing. Throughout this discussion, we also present the strategies suggested in the literature to address each of the physical, social, and government/management factors discussed. The ordering of these factors serves only the purpose of contributing to the internal organization of this report and is not designed to give priority to any one factor.

Analyzing Approaches to Crime Prevention

After presenting a broad range of physical factors, social factors, government policy and management issues, and the strategies addressing each of these factors, we then review the literature which discusses several integrated crime reduction approaches.

These approaches were selected for two basic reasons. First, they include the use of strategies addressing many of the physical and social factors and management issues discussed above. Second, the authors--Newman, Gardiner, Brill, Rosenthal, and the Westinghouse National Issues Center--are persons and groups whose work is represented in the formal literature and who also have first-hand experience in planning and implementing crime reduction efforts in public housing and urban neighborhoods.

The format for the discussion of integrated approaches is as follows. First, we discuss five criteria suggested in the literature as important components of an effective crime reduction strategy: (1) the use of data, mapping techniques, and systematic research methods in the development of the crime reduction approach; (2) the extent to which each approach addresses the social and physical factors raised in the literature as potential contributors to the crime problem; (3) the use of citizen involvement and the recognition that residents are an important resource in crime reduction efforts; (4) the extent to which each of the practitioner's strategies represent an integrated approach to reducing crime in and around public housing; and (5) the extent to which the practitioner addresses the issues of responsibilities among key groups. After discussion of the literature regarding each of these criteria, we then review systematically each practitioner's approach beginning with Newman and continuing with Gardiner, Brill, Rosenthal, and the Westinghouse National Issues Center. Again, the ordering is not to imply any sense of priority.

We conclude by identifying gaps in the proposed strategies and by presenting a list of topics that must be researched further if effective anti-crime techniques are to be developed.

CORRELATES OF CRIME AND CRIME PREVENTION STRATEGIES:
PHYSICAL FACTORS

Introduction

There is general agreement in the literature that physical design characteristics can make criminal opportunities more difficult for the potential offender. Physical design can also facilitate the detection of offenders.

There is also agreement in the literature that the structure of the physical environment influences the social behavior of residents in ways that can reduce or enhance the probability of a crime being committed. Physical characteristics that encourage "territoriality," the creation of "defensible space," and promote the impact of "access control" on social cohesion are essential concepts in the crime-environment literature.

The literature begins chronologically with Wood (1961) and her discussion of the physical design of public housing. She stated that the physical characteristics of public housing complexes minimize communication and informal gathering among residents and thereby preclude the development of a sense of community. She concluded with the hypothesis that physical design was responsible, in part, for the lack of social control that residents of public housing had over their environment. Later that year, Jane Jacobs (1961) expanded on some of these ideas in *The Death and Life of Great American Cities*. Jacobs stated that crime and the physical environment are related in a systematic, observable, and ultimately controllable manner. Jacobs' central hypotheses were that there are two essential physical characteristics that must be present in order for streets, neighborhoods, and residential areas to be safe:

1. There must be natural surveillance ("eyes on the street")
2. There must be continuous and multiple uses of neighborhood facilities

Jacobs stated that surveillance naturally deters crime by increasing criminals' risk of apprehension. Continuous multiple uses of neighborhood facilities enhance surveillance opportunities through creating overlapping patterns of pedestrian movement and therefore keeping "eyes on the street" at all times of the day and evening.

Though Wood and Jacobs presented only a preliminary theoretical discussion of the relationship between the physical factors of an environment and crime levels, their work was significant in drawing attention to the importance of investigating the crime-physical environment relationship in public housing complexes and urban neighborhoods. Among the authors who cite Jacobs and Wood as their theoretical predecessors are Angel, Newman, and Jeffrey. Eight years after Jacobs' book, Schlomo Angel (1969) wrote:

The physical environment exerts a direct influence on crime settings by delineating territories, reducing or increasing accessibility by the creation or elimination of boundaries and circulation networks, and by facilitating surveillance by the citizenry and the police.

Angel, like Wood and Jacobs, stressed the importance of one of the most commonly cited correlates of crime in the crime-environment literature--surveillance.

In the late 1960s Newman began investigating the relationship between the physical environment of urban areas including public housing complexes, and crime levels. His

work has highlighted a variety of physical factors that he hypothesizes contribute to the high levels of crime and fear of crime in and around public housing.

During the early 1970s, C. R. Jeffrey in *Crime Prevention Through Environmental Design* presented a theoretical framework based upon a rejection of current criminal justice strategies such as "deterrence" or "rehabilitation." He suggested that the crime prevention strategy with the greatest potential involved a heavy reliance on physical changes to reduce the number of "criminal opportunities in the environment" (Jeffrey, 1971, revised 1977).

Since the early 1970s, the number of researchers, practitioners, hypothesizers, and theoreticians writing about the relationships between physical factors and the incidence of crime and fear of crime has grown tremendously. Although their numbers, jargons, research strategies, and "tests" of theories have increased, the central assumptions regarding the relationship between the physical environment and crime have remained the same. First, the physical environment can *independently prevent crimes* (or make them very difficult) through target hardening. Second, changes in the physical environment can *change the behavior of residents* in ways that increase the likelihood that an offender will be impeded and/or apprehended. Third, regardless of what the residents do, the physical environment design can *deter an offender from choosing a particular location* as a target. Last, the combined impact of the above three can be made even stronger if there is consideration given to the social correlates of crime and if residents are actively involved in planning and implementing crime prevention programs.

The recent literature on the relationship between the physical environment and the incidence and fear of crime hypothesizes that numerous physical factors in the environment in and around public housing contribute to the problem of crime. The physical factors that will be reviewed apply primarily to the immediate public housing environment, but also to areas "around" public housing--such as across the street or within the same neighborhood. The six most commonly mentioned factors include:

- Lack of surveillance
- Lack of adequate locks, door and window frames, alarms, etc.
- Lack of access control
- Lack of clearly defined areas and physical facilities on the grounds of public housing
- Existence of conflicting user groups and uses of public housing grounds
- Lack of adequate circulation patterns and transportation services and facilities

Lack of Surveillance

One of the repeatedly cited physical factors considered a likely contributor to crime is the existence of areas within and surrounding a public housing complex where surveillance by residents, management or security personnel is severely restricted (e.g., grounds not overlooked by windows, poorly lighted areas, hidden areas, stairways, poorly placed amenities

such as laundry rooms near basement entrances that are concealed from sight, etc.).

There are many empirical studies that document the inverse relationship between level of surveillance opportunities and crime rates (Angel, 1969; Brill, 1974-1978; Dietrich, 1977; Luedtke, 1970; Molumby, 1976; Newman, 1972, 1975, 1977, 1978; Pope, 1977; and Repetto, 1974). In addition to these studies, a second type of analysis documents that the lower the number of surveillance opportunities for a given area, the higher the residents' fear of crime (Dingemans, 1978; Malt, 1973).

The strategies employed to increase surveillance opportunities and thereby make areas of low surveillance less crime-prone and fear-producing include physical design changes such as placing of windows and additional lighting. Newman (1973), Brill (1974), and others have also suggested moving activities currently in areas of low surveillance, such as recreational activities for children, and amenities such as laundry rooms into highly visible areas near paths and walkways. In effect, the goal of this strategy is to bring as many of the residents' activities as possible into areas where surveillance opportunities are adequate.

The rationale for increasing surveillance opportunities as a crime reduction strategy is twofold. First, potential offenders will develop a sense of perceived risk of being seen (apprehended); and, therefore, hopefully will be deterred from committing crime in the area. Second, residents, management, and security personnel will have a greater opportunity to see and respond to crimes as they are being committed. Studies have shown that one of the important variables determining apprehension rates is the length of time it takes for security personnel or the

police to be notified of and respond to the crime.

This strategy also has important limitations. In order for surveillance to serve as a deterrent, the *offender must perceive* that his risk of apprehension is relatively high. Luedtke's findings that a large proportion of muggings and purse snatchings in public housing complexes occur during the day in places where surveillance opportunities are good suggests that surveillance alone may not deter crime (Luedtke, 1970). A second important element of this strategy also relies on residents *reacting* to crimes they are able to see.

Lack of Adequate Locks, Door and Window Frames, Alarms, Etc.

A second physical factor commonly cited as a contributor to the crime problem is inadequate locks on doors, windows that are too low or too close to adjacent residential units, and the absence of electronic surveillance equipment. Four empirical studies present conclusions that residential public and private housing units with poor locks, doors, and windows have a higher than average number of burglaries. Newman (1973, 1975) discussed how windows that can be entered from adjacent apartments contribute to the vulnerability of public housing units. Brill (1974-1978) found similar results in the public housing sites that he analyzed while Pope (1977) and Scarr (1972) both found that in residential areas, poorly secured dwelling units are more often burglarized than those with adequate locks, doors, and window frames.

In addition to thwarting burglary attempts, the use of alarms as a target hardening device could increase the likelihood of apprehension by being set in such a way that the alarms notify someone who is capable of responding quickly.

The weaknesses or limitations of target hardening approaches are well known. First, potential offenders may eventually figure out methods to circumvent locks, bars and even sophisticated alarm systems. Second, the appearance of bars and large locks on door and windows may increase the residents' fear of crime rather than reduce it. Third, this strategy is designed to prevent only one element of criminal activity (forcible entry). Using this strategy in isolation from other strategies may displace crime from inside one's apartment onto the grounds--or other less private parts of buildings.

Lack of Access Control

A third physical factor which is a correlate of crime is the lack of access control both to public housing grounds and residential buildings. Lack of access control onto the grounds refers to the absence of real or symbolic barriers that may serve to prevent non-residents from walking freely onto the grounds. The lack of access control to residential buildings refers to a condition discussed by Newman (1973) where too many residents share the same uncontrolled or unguarded entranceway. Brill (1974-1978) calls this characteristic "penetrability."

In theory, physical design changes to promote access control do more than just channel non-residents onto paths where they are more easily seen and noticed by residents. In Newman's words, physical design changes such as boundaries, be they symbolic (low walls, landscaping) or real (high fences), "inform one (the non-resident potential offender) that he is passing

from a space which is public and where one's presence is not questioned, through a barrier to a space which is private and where one's presence requires justification" (Newman, 1973).

Space can be divided into four zones:

1. Public space--an area that is open to anyone and serves a variety of uses
2. Semi-public space--an area such as a lobby which is open to the general public but which has a limited number of uses
3. Semi-private space--an area such as an apartment hallway that is restricted to few persons from the "public" and is mainly occupied and used by residents of the building
4. Private space--an area reserved for residents only, such as behind the closed door of an apartment (Newman, 1973)

Brill's (1976) study of Millvale public housing complexes in Cincinnati, shows that the two highest crime areas in the complex are near the perimeter of the complex where there is no access control to prevent non-residents from easily moving on and off of the grounds. Brill's studies of other housing complexes, as well as Newman's study of site vulnerability in public housing, also show higher than average incidences of crime in such places.

In a recent study of residential areas, Bevis and Nutter (1977) showed that streets with limited access, such as cul-de-sacs, have lower rates of burglary. Newman (1975) had similar findings in St. Louis. Molumby (1976), in his study of crime in a university housing complex, found open access was a contributor to crime and recommended that gates and fences be strategically placed around the housing complex. Phelan's (1976) study of security for middle-income townhouse complexes concluded that a barrier along the periphery is an important security feature.

The theoretical statements and supporting documentation are clear and consistent. To the extent that non-residents are contributing to the crime problems in and around public housing, access control for the purpose of preventing unrestrained entry onto the grounds may serve to reduce crime in these areas.

The argument above also applies to access control to residential buildings themselves. In addition to technological equipment (intercoms, buzzer systems), Brill (1976) and Newman (1973, 1975) stress that only a limited number of residents should share the same entry or space outside an entry. Fewer persons per entry increase personal recognition and association, which may reduce crime. Limiting the number of residents per entranceway and the creation of semi-public space around each entranceway is called "clustering." This technique used by Brill in Millvale (Cincinnati) and by Newman in several public housing complexes, has the effect of separating a large complex into smaller areas. Brill has adopted this approach at Nickerson Gardens (Los Angeles), where large areas of space were divided into semi-public areas, in order to create a sense of neighborhood. Clustering is suggested in the literature as an approach to increase surveillance, territoriality and social cohesion and increase the offender's perceived risk of apprehension.

Some evidence based on the work of Newman (1973, 1975), Brill (1976) and others shows that access control strategies, when combined with other physically oriented crime reduction strategies, may reduce crime. Papers presented by local public housing authorities at the NAHRO/HUD Conference show that over the past few years large sums of money have been spent for physical design changes that represent attempts to control access to both public housing grounds and buildings.

In general, there are several limitations to strategies seeking to improve access control to public housing grounds and buildings. First, the effectiveness of low walls and symbolic barriers in deterring offenders, especially at night, is open to question. Second, electronic devices to control access into residential buildings are often broken and are especially susceptible to vandalism by youth that live in large numbers in and around public housing. Third, the use of access control strategies such as fences and shrubberies may reduce surveillance opportunities. This is an important point since here we find a strategy that reduces one problem element while possibly increasing another. Other potential conflicts among crime reduction strategies are possible, and we find rather limited discussion in the literature regarding the trade-offs that may arise between the "solution" to one component of the crime problem and increases in others. Papers presented at the NAHRO/HUD Conference stated that fences and various types of landscaping directed at improving access control often serve as "hiding places" for offenders, especially youths.

*Lack of Clearly Defined Areas and Physical Facilities
on the Grounds of Public Housing*

A fourth physical factor hypothesized to contribute to the crime problem is the lack of clearly defined areas, resulting in large "No-Man's Land" areas where unstructured activity takes place by residents and non-residents alike. A second part of this factor is the lack of satisfying, stimulating physical facilities such as recreation areas, walkways, and landscaping. "No-Man's Lands" are hypothesized to be contributors to crime since certain groups occupy the area without any constructive purpose.

The existence of "unassigned" or public space has been hypothesized to be a contributor to the crime problem by Jacobs (1961), Newman (1973, 1975), Dingemans (1976) and Brill (1974-1978). There exists strong logical argument but little empirical evidence to support this hypothesis. Certainly these are areas over which control can be exercised by a few involved in anti-social behavior. However, converting an entire public housing complex into semi-private or restricted areas would be extremely difficult and certainly very expensive.

There is more substantial evidence that the second part of the factor--lack of satisfying, stimulating physical activity areas--does contribute to the crime problem, especially vandalism. Spivak's (1974-1978) work in redesigning parks and playgrounds for children documented that vandalism in these areas is often a reaction to equipment and a playground design that is not satisfying. Wood (1961), in her book on designing housing complexes, called for attractive walkways and areas where social interaction would be stimulated. Malt (1973) suggests that the inclusion of "street furniture" in one urban area (Cincinnati) could have the effect of reducing crime and fear of crime, as well as user satisfaction with the area.

Such a strategy may reduce vandalism and may provide increased satisfaction among residents regarding the place where they live. Still, this strategy is very limited in its scope. As is the case with all other individual strategies, it must be applied with other complementing strategies.

Existence of Conflicting Uses of Public Housing Grounds

Another physical factor believed to contribute to the crime problem in and around public housing is the existence of conflicting uses of public housing grounds. The problem is best exemplified in situations where teenagers have a play area adjacent to sitting areas occupied by elderly persons. Having such conflicting user groups and uses adjacent on public housing grounds is hypothesized to increase the probability of being victimized. In addition, the placing of conflicting groups and uses adjacent to each other may prevent both groups from using the area as they wish and prevent the users from developing both territorial attitudes toward the space and self-protective mechanisms such as checking neighbors' residences and questioning non-residents (Brill, 1974-1978; Newman, 1973, 1975).

The strategies suggested to combat this problem are intrinsically appealing. Such general suggestions as moving teenagers' outdoor play areas away from children's sandboxes, or moving these play areas away from sitting areas for elderly persons, parking lots, or grounds near liquor stores or near high density traffic patterns have been proffered. However, we have found little empirical evidence for the contention that the existence of conflicting user groups and uses of public housing grounds contributes directly to the problem of crime and fear of crime in public housing settings. It is obvious that this physical factor violates sound architectural principles, but it has not been shown conclusively that strategies to address this physical factor will in any way also address the crime problem.

*Lack of Adequate Circulation Patterns
and Transportation Services and Facilities*

The final physical factor to be discussed which the literature identifies as a potential contributor to crime is lack of adequate circulation patterns and transportation services and facilities. Much of the research on this factor has been conducted at the neighborhood and city-wide level (Bevis and Nutter, 1977; Gardiner, 1978; Newman, 1975; and others). Gardiner (1978) discusses circulation and transportation patterns as crime facilitators on a city or neighborhood scale. His design work was incorporated into the Hartford Anti-Crime Demonstration Program, and when combined with the other elements of the program, crime was reduced (Fowler, et al., 1978). The applicability of his work to the public housing complex environment has not been developed fully, either through site security analyses or actual implementation. Similarly, the research of Bevis and Nutter (1977) on street design and Newman's work (1975) on the closed-end streets of St. Louis all show that transportation and circulation patterns at the neighborhood level may have some effect on crime rates.

The circulation patterns which are of primary interest to this study of crime in and around public housing are pathways, walkways and the movement of people on the grounds of public housing complexes. The transportation facilities of primary interest are bus stops.

The problem of poorly defined circulation patterns in public housing is discussed primarily by Newman (1973, 1975) and Brill (1974-1978). Each author states that uncontrolled circulation allows potential offenders to walk near doors and windows of first floor apartments and other physically

vulnerable places. The lack of adequate circulation patterns decreases the chance of potential offenders' being noticed by residents and security patrols as they approach residential buildings and vulnerable places within the public housing complex. The literature suggests that the lack of adequate circulation patterns limits surveillance opportunities, prevents effective access control; stifles attempts to define specific areas on public housing grounds; and, in general, increases the vulnerability of the physical site of potential offenders.

Strategies to address this factor include the creation of walkways designed to channel pedestrian movement through a public housing complex in a controlled, easily watched manner. Shrubbery is often used along either side of the pathway to limit disregard for the designated route.

There is considerable logic but little empirical evidence suggesting that this physical factor is a contributor to the problem of crime. The strategy to address this factor in combination with the other physically oriented strategies may serve to reduce crime. No support is found in the literature suggesting that this strategy alone will address the crime problem. Thus, most practitioners utilize this strategy only in combination with others discussed in this section.

The major problem cited regarding the lack of adequate transportation services and facilities involves the long waiting periods that public housing residents have at isolated, poorly lighted bus stops. Brill's surveys of public housing residents at four developments in the Boston area show that 75 percent of the residents consider "waiting for the bus alone at night" as "very dangerous" (Brill, 1975).

Strategies designed to reduce crime and fear of crime at bus stops suggested by local Public Housing Authorities at the recent NAHRO/HUD Conference included moving bus stops closer to places where people congregate, increasing lighting, and other similar efforts to increase surveillance opportunities. Improving the transportation service by decreasing headways was also suggested.

The major limitation to addressing transportation related crime and fear of crime problems is that these actions must be initiated by the local public transportation department, and cannot be done independently by the Public Housing Authority. In this case, the strategy must involve several public agencies which may prove to be difficult. A second limitation is that little evidence exists in the literature which shows what kind of strategy will have the greatest impact on reducing the very high fear of crime that public housing residents feel with regard to waiting for the bus alone at night.

Summary

We have reviewed the literature discussing physical factors which may contribute to the problem of crime in and around public housing. We have also discussed the empirical evidence that supports some of these crime-physical environment hypotheses and noted where we found such evidence lacking. We listed some of the strategies suggested by the leading authors on ways to modify the physical environment and in turn reduce crime. The strategies were presented individually, although there is general agreement in the literature and among practitioners and tenants, that various combinations of these strategies will be necessary to reduce crime and the fear of crime problem depending on the physical design problems of the public housing complex. We now turn to a discussion of the

literature dealing with the social factors considered to be contributors to the crime problem in and around public housing and the strategies suggested to address these social factors.

*CORRELATES OF CRIME AND CRIME PREVENTION STRATEGIES:
SOCIAL FACTORS*

Early in our analysis it became clear that the social characteristics of the resident population were stronger predictors of crime rate than the physical characteristics of design (Newman, 1975).

If there is going to be security in public housing, it needs to be a product of internal resolve (Rosenthal, 1975).

The vulnerability to crime of many public housing projects, particularly large projects, does not stem just from design and equipment deficiencies. . .The problem of security in public housing also stems from the weak social structure of the residents, the absence of supporting groups, and a lack of interpersonal trust--all factors that inhibit people from protecting and helping each other (Brill, 1975).

Introduction

The physical factors that contribute to crime and the fear of crime in and around public housing have been extensively written about since Wood's work in 1961. Recently, however, there has been a trend developing in the literature recognizing that physical design changes may reduce only some aspects of the problem around public housing. The major authors have recently begun to write more extensively on social factors that contribute to both crime and fear of crime and socially oriented strategies that may deter crime. For example, Newman's early work was directed

almost exclusively toward investigating physical factors. (They were his "independent variables.") More recently he has begun to investigate some of the social factors that may contribute to the crime problem. Initially, writings on the Pruitt-Igoe Project in St. Louis left one with the impression that much of the problem in that housing complex was a physical design problem. Later writings by Rainwater (1970) and Montgomery (1977), however, pointed to a combination of social factors that significantly contributed to crime-related problems. Research conducted for HUD by Brill (1974-1978) at eleven public housing complexes has investigated a wide variety of social factors that were hypothesized to contribute to the problems of crime and fear of crime among public housing residents. In addition, Rosenthal (1978) has written that the primary problems that public housing residents face are social problems and demand social-oriented responses.

The recent literature is quite explicit in describing a wide range of social factors existing in many public housing and low-income minority populations which may contribute to crime. At the same time, the literature is quite narrow in that it does not address many of the potential contributors to crime--such as the condition of poverty in which many public housing residents live. Nor does it offer many broad theories regarding the causes of crime. The focus of the literature is on the lack of *end conditions* that are suggested will reduce crime, such as development of social organization and social cohesion among public housing residents. Thus, our review of the literature reflects this focus. This section discusses these social factors highlighted in the literature in the following order:

- Lack of social organization, social cohesion, and informal social control
- Lack of proprietary interest and territoriality among residents

- Lack of adequately trained, culturally sensitive security personnel
- Lack of social services and crisis intervention programs to address social problems of residents
- Lack of supervision and organized activity for youth
- Lack of employment opportunities for residents

In addition to describing each social factor, we also present the strategies that have been suggested to address these problems. We should point out beforehand that while there is a consensus on the existence of many of the social problems, the state-of-the-art knowledge regarding the relative contributions of each factor to the problem of crime is limited. For example, there is a consensus that residents of public housing complexes lack social organization, social cohesion, and informal social controls. There is also a consensus that this social problem contributes to the vulnerability of the residents to crime. However, we found no empirical study that measured the extent or way in which this social factor or any other social factor listed below actually contributed to the problem of crime. The relative contributions of each factor may, in fact, change from one public housing complex to another. In addition, some complexes may have social problems that contribute to crime in addition to those we have listed here.

*Lack of Social Organization, Social Cohesion,
and Informal Social Control*

The social factor most often cited as contributing to the crime problem in and around public housing is the lack

of social organization, social cohesion, and informal social controls on the part of the residents. We operationally define *social organization* by the amount of group activity in which public housing residents participate; the existence of recognized leaders among the residents; the amount of informal interaction; and the existence of alienation, distrust, and anomie. *Social cohesion* can be operationally defined as the number and intensity of friendships among residents, the real and perceived levels of actual and potential helping behavior, and the level of social isolation felt by residents. *Informal social controls* are behavior inducing roles, norms, and enforcement mechanisms that are developed and carried out on an ad hoc basis among residents.

The literature is consistent in its finding that the level of social organization, social cohesion and the extent of informal social controls is minimal in many public housing settings. Brill (1974-1978) conducted studies in eleven public housing settings. His conclusion was:

Social relations in such a project are marked by distrust. Few people dare to rely on one another. The social posture of the residents is basically defensive and insular. There is a good chance that many residents feel alienated from the larger society as well as from each other. This same feeling often extends to the housing authority, the local public agency that is responsible for managing the project. In many cases, housing authorities have not been able to involve tenants sufficiently in the management process and discontentment is likely to exist among residents over this issue, as well as over the general quality of management services being delivered by the authority. Residents frequently feel, and with good reason, that housing services, for example, maintenance, are inadequate; and they see their deficiencies as one more sign of their social isolation and neglect (Brill, 1973).

Contrast this with the statement from Krop (1976) that self-protective helping behavior which serves as a crime deterrent tends to be present in neighborhoods of "mutual identification, interactional intensity and esprit de corps." Others including Rosenthal (1974-1978), Wilson (1975), Rainwater (1970), and Montgomery (1977), have written about the low levels of social organization, cohesion, and informal social controls that exist in public housing.

Although there is limited empirical evidence on a nationwide level regarding important aspects of the social life in public housing, the weight of the evidence shows that residents of public housing are surrounded by other individuals (residents) who do not participate in group activities, do not exhibit helping behavior, and do not recognize or promote informal social control mechanisms.

The literature is consistent on the relationship between the lack of social organization, social cohesion, informal social control and the crime rate. A statement by the National Advisory Commission on Criminal Justice Standards and Goals (1973), represents the consensus viewpoint expressed in the literature:

Indeed, with each citizen looking out for himself only, there is no community, no strength in numbers, but rather a fragmentation that can serve only to embolden criminal elements.

Conference participants at the AIR Conference on Crime and Public Housing agreed that in order to reduce crime an "ethos of service" and a neighbor helping neighbor attitude must be developed and promoted by residents and by public housing management.

One strategy to enhance social organization, social cohesion, and informal social controls is presented by Brill (1974-1978) and by Rosenthal (1974-1978). Brill calls for the development of tenant organizations and the holding of group meetings where residents elect representatives and hall captains, establish anti-crime councils, etc., and make decisions regarding a whole range of issues that are important contributions to the social environment. Rosenthal (1974-1978) suggests the use of "community security organizers" who will serve as non-uniformed security persons, organize resident group meetings, and also serve as a liaison among residents, management, and local police authorities.

Another strategy designed to stimulate self-protective behavior includes crime prevention education programs for residents. These programs have been used recently by several local public housing authorities with goals to reduce the fear of crime and the actual incidence of crime as well as increase the capability of residents to protect themselves and their neighbors. In addition, residents at several local public housing authorities have recently implemented a variety of self-protective activities including escort services, neighborhood watch efforts, apartment checks when other residents are out of town, and phone-calling services for residents who are particularly afraid of being victimized. In addition, a variety of activities designed to encourage residents to report crime and suspicious activity--including hot-line services, improved communication between residents and security patrol personnel, and public housing authority assurances of adequate protection for residents willing to testify against offenders--have been implemented.

Several of these strategies seek to stimulate interpersonal contact and both individual- and group-oriented self-protective behaviors. Others seek to develop leadership and authority structures among residents and generally to develop an "internal resolve" and the social capacity to act collectively when dealing with the problems of crime and fear of crime. Since some of these strategies have been implemented and tested in only a few local public housing authorities we know little about the magnitude of the crime reduction that could be expected to result from their implementation.

There are important concerns raised in the literature regarding the group of resident organization strategies presented here. When attempts have been made to implement these strategies there have been several drawbacks noted. These strategies are time consuming, difficult to manage and in some cases, have led to conflict situations among residents and between residents and management.

Lack of Proprietary Interests and Territoriality Among Residents

The second social factor that many authors believe contributes to the crime problem in and around public housing is a lack of feeling of proprietary interest or "territoriality" among individual residents. Proprietary interest can be best defined as the attitude held by individual residents that each has a "stake" in the environment, identifies with it, and is willing to make a personal investment in order to improve the quality of his/her life there. Territoriality is an attitude whereby residents desire a sense of control over their environment. Residents that have territorial attitudes are willing to contribute to the establishment of community norms and standards and exercise control over non-residents and those who are

involved in anti-social behavior (Krop, 1976; Newman, 1973; Rosenthal, 1974; Wilson, 1975).

In addition, as Rosenthal (1974) points out, territoriality and proprietary interest are essential ingredients for the development of a sense of community. Further, the lack of a sense of community contributes to lack of interaction and discourse among residents. Other negative consequences include a lack of helping behaviors among residents.

The strategies suggested to promote proprietary interest and territoriality among individual residents include both socially oriented strategies and physical design changes. Physical strategies include, for example, the clustering of dwelling units to reduce the number of persons sharing a common entranceway--access control.

The socially oriented strategies suggested to enhance attitudes such as territoriality and proprietary interest include all of those suggested above to improve social organizations, social cohesion and informal social control. In addition, they include employment and the provision of organized activities for youth. Rosenthal (1974) suggests "a community promenade," where residents of an area get to know each other simply by knocking on doors and introducing themselves.

The strength of these approaches includes promoting a feeling of security among residents in a more direct manner than is suggested by other approaches. These social strategies that promote a sense of territoriality, therefore, can be expected to reduce the fear of crime significantly. What is less certain is whether these strategies will affect the crime rate itself.

Lack of Adequately Trained, Culturally Sensitive Security Personnel

Many of the papers presented at the NAHRO/HUD Anti-Crime Conference stated that the local public housing authority had an insufficient number of security personnel to patrol high crime residential complexes on a 24-hour basis. In the face of shortages of paid and trained security officers, housing authorities often turn to the use of volunteer groups including youth and adult patrols to supplement their regular security force. There are serious limitations to relying heavily on the volunteer approach since the security officer's job in many public housing complexes requires substantial training, experience and a good working relationship with law enforcement personnel in order to be effective.

Of primary concern to participants at the NAHRO/HUD Anti-Crime Conference was the lack of adequate training for all types of security personnel. "Adequate" training for public housing security personnel is difficult to define in the abstract. However, based on papers presented at that conference, a trend is obviously developing for public housing authorities in large urban areas to require that security personnel receive a formal training course from police and sheriff academies. Chicago, Pittsburgh, and New York are among the many examples of housing authorities currently using police and sheriff academies.

An additional issue raised in the literature is the need for security personnel to be culturally sensitive to the needs of the population they are attempting to serve (President's Commission on Law Enforcement and the Administration of Justice, 1967; Rosenthal, 1974-1978; Wilson, 1975). The

literature and the papers presented at the NAHRO/HUD Anti-Crime Conference suggest that security personnel who are neither capable nor willing to communicate with residents on a helpful social basis as well as in the traditional law enforcement officer role, will not be trusted by residents nor will they be successful in dealing with the problems of crime and the fear of crime among public housing residents. There is some discussion (though little empirical evidence) in the literature and in the NAHRO/HUD papers of the hypothesis that the effectiveness of security personnel in part depends on the helping behavior and cultural sensitivity displayed in the course of duty.

Strategies designed to address the problem of lack of cultural sensitivity usually involve the selection of public housing residents to be employed either as non-uniformed security personnel (such as Rosenthal's "Community Service Organizer"), or as uniformed security personnel given training and full responsibilities. In addition, team policing strategies have been suggested where one of two security personnel working together has a broad cultural awareness of the resident population in and around public housing. Evidence cited by Yin (1976) shows that citizen patrols may be effective in helping to reduce crime in public housing. Similar evidence is presented by Rosenthal and Allen (1977).

*Lack of Social Service Programs to Address
Social Service Problems of Residents*

Brill's "vulnerability analyses" of public housing residents show that residents perceive high levels of drug and alcohol abuse in and around projects. In three of the four public housing complexes studied in Boston, Brill (1974) found that over 90 percent of the residents considered drug abuse to be a "very serious problem," and over 60 percent considered drinking to be a "very serious problem." Brill's studies of other public housing complexes support these findings and point out that residents report that such social problems as mental illness (depression) and the lack of such services as homemaking and day care for children were also very burdensome on residents (Brill, 1974). There have been numerous studies showing the positive relationship between social problems such as drug abuse and alcoholism, and crime levels (see, for example, Wilson, 1975).

Brill's research shows that many of the residents, especially women who are single heads of households, have an array of deeply rooted social problems and need help in addressing them. He hypothesizes that these social problems contribute directly in so far as the residents who have drug or employment related problems may commit crimes in order to have money. They contribute indirectly as they reduce the potential for social cohesion and self-protective behaviors to limit the residents' vulnerability to potential offenders.

Brill suggests that reorienting and expanding social services in public housing and training local residents to provide needed social services, including crisis intervention programs, would: (1) improve the social structure of the residents;

(2) aid them in alleviating social needs; (3) reduce their vulnerability to crime and; (4) over a period of time, reduce crime itself. Providing additional and more individualized social services as a means of addressing resident social problems has been shown by Brill to be a serious concern of public housing residents.

There is some support and some limited disagreement over Brill's suggestion to reorient and expand social services in order to reduce crime in and around public housing. Teitz (1975) has shown that low levels of vandalism in multi-family housing are associated with high availability of services for teenagers. Rosenthal (1974-1978) also suggests expanding social services in order to reduce crime based on his research in public housing environments. The Chicago Public Housing Authority, as part of its crime reduction program, has sought to individualize its human services delivery system and referral programs at the Cabrini-Green Complexes.

On the other hand, a study by Rabushka and Weissert (1977) states that when given a choice between additional social services and additional security personnel, a majority of public housing residents in one public housing complex in Wilmington, Delaware is in favor of adding security personnel. A similar argument is presented in the paper prepared by the Public Housing Authority of Pittsburgh (1978) for the NAHRO/HUD Conference. This paper stated that Pittsburgh residents prefer a security program with uniformed guards rather than the use of persons whose job is a combination of social service provider and non-uniformed security officer modeled after Rosenthal's Community Security Organizer.

The weight of the empirical evidence on this issue is provided by Brill (1974-1978), whose research at eleven public

housing complexes consistently showed that residents perceive a serious shortage of social service programs. In addition, Brill's work suggests that the special social service needs of women in public housing are currently inadequate in scope. He states that failing to meet the needs of single, head of household women in public housing contributes to their vulnerability to offenders. More generally, he hypothesizes that providing needed and effective social services, in conjunction with physical design changes, will contribute significantly to the reduction of crime and the fear of crime in and around public housing.

Brill's suggestions for reorienting and expanding social service programs have not been implemented fully in a public housing environment. Therefore, we have no empirical results upon which to evaluate the hypothesis that *expansion* of social services will reduce the levels of crime and fear of crime.

Lack of Supervision and Organized Activity for Youth

Another commonly cited contributor to the problems of crime and fear of crime in public housing is a lack of supervision and organized activity for youth. The literature on juvenile delinquency pays particular attention to problems of youth from low-income and single-head-of-household families in the environment. The literature and the participants at the AIR conference on Crime and Public Housing stated that the combination of one-parent families and large numbers of children contributes significantly to youth-related crime problems.

In addition, there is a growing literature on the leniency of the courts in dealing with youth offenders. Further, there are numerous books discussing the sociological theories of youth crime including the impact of factors such as relative deprivation, anomie, and lack of avenues for successful integration into the mainstream of American life. Psychological explanations (Spivak, 1974) often cite frustration and lack of self-fulfillment and awareness as contributing factors to the problems of crime, drug abuse, alcoholism, and unemployment. The educational

system is also often charged with failing to meet the special needs of the youth who live in and around public housing.

The lack of supervision and organized activity for youth in public housing has been cited as a contributing social factor to the youth crime problem by several authors (Gold, 1963; Nye, 1958; and others). There is some empirical evidence supporting this position. In order to test further defensible space hypotheses and fill several gaps in the literature, Newman has recently begun a study for the National Institutes of Mental Health on the relationships such variables as physical design, real and "felt" supervision, and anti-social behavior by youth.

The literature provides a long list of strategies to address the youth problems associated with lack of supervision and organized activities. Some examples are:

- Employ youths as "youth security patrol" members
- Provide supervised recreational, educational, and cultural activities for youth
- Provide opportunities for youth to aid in delivering needed social services for public housing residents
- Provide employment and training opportunities for youth
- Match youths with older persons for socializing, and to provide role models for youths
- Link up public housing youth with all available government supported and other publicly supported or volunteer programs for youth
- Establish a buddy system or organize a "proxy" parent system where friends of parents take over supervision responsibilities on a regular basis
- Follow-up truancy problem cases residing in public housing; have daily visits to the student and evening meetings with the family

The logic behind these strategies is compelling and studies have shown that employment and other strategies providing organized activities for youth can have a measurable effect on crime rates (National Urban League, 1978; U. S. House of Representatives, 1978). Implementing some or all of these youth-oriented approaches in the public housing environment may serve both to reduce crime as well as provide additional information on the broader issue of combatting juvenile delinquency.

Though these strategies may have the potential for reducing crime and the fear of crime, there are limitations to this set of strategies. First, designing the activities in such a manner that youth will be interested in participating is not an easy task. Second, in public housing complexes where distrust exists between youth and housing authority officials, obtaining youth support and cooperation for these strategies may be next to impossible. Implementation difficulties may serve as barriers to large scale efforts to provide supervision and organized activities for youth.

Lack of Employment Opportunities for Residents

One of the social factors most often cited as a contributor to the problem of crime is the high rate of unemployment experienced by public housing residents. Although nationally aggregated data are not available showing the actual percentage of public housing residents who have full-time unsubsidized employment, statistics collected from the papers prepared for the NAHRO/HUD Conference show that in three public housing complexes in Los Angeles County, only 9 percent, 23 percent, and 25 percent of the residents had full-time unsubsidized employment. The New Orleans Public

Housing Authority reports that less than 20 percent of the residents in the "Florida" Residential Complex are employed, although it is in an industrial part of the city. Other Public Housing Authorities show similarly low rates of employment as well as unemployment rates that exceed ten times the national average.

Although the entire body of literature does not support the position that there is a strong positive relationship between low levels of employment and high levels of unemployment and underemployment on the one hand and the level of crime on the other, the weight of the evidence does, in fact, support this position. For example, using macro-economic data (national unemployment rates), Brenner (1976) has shown a positive correlation between property crime, delinquency, homicide, and the unemployment rate. Clark (1970) cites poverty in general and unemployment in particular as important contributing factors to the problem of crime. Without employment opportunities, Clark says that crime will serve as one of the primary means of earning a livelihood for the urban poor. In hearings soon to be published by the House Subcommittee on Crime, research using historical data on unemployment and property and violent crime rates, indicates that there are strong correlations between unemployment rates and crime rates. The Subcommittee hearings also cite research showing that nearly 50 percent of the persons arrested recently in Washington, D. C. were unemployed at the time they committed the crime (U. S. House of Representatives, forthcoming). Other sources state that the problems of crime and unemployment are, in fact, related. Participants at both the NAHRO and AIR Conferences stated that their experience living in public housing, conducting research, or operating crime prevention programs led them to believe that crime and unemployment are related, and recommended that crime reduction strategies that create jobs for residents be used widely.

There are several strategies that Public Housing Authorities may use to reduce unemployment among their residents and thereby possibly reduce crime. First, the Housing Authority can hire residents to work on activities addressing the other social and physical factors hypothesized to be contributors to crime. Residents working as auxiliary security personnel, social service aides, or helping make physical changes not only gain the opportunity to obtain needed wages and training, but also may serve as an important link between the residents and management of public housing complexes.

A second strategy that a local Public Housing Authority can use to promote the employment of residents is the addition or expansion of employment counseling and job development services for residents. This strategy was mentioned in papers prepared for the NAHRO/HUD Conference by several Public Housing Authorities; and, given the already close links that many authorities have with the public employment and training programs under CETA, start-up and implementation difficulties are not expected to be great.

Summary

We have reviewed the literature on crime and have identified six social factors that are hypothesized to be contributors to the crime problem. Only limited data are available to document the statistical relationship between each of the social factors and crime. In addition, the use of the strategies designed to address these social factors have by and large not been evaluated systematically as crime reduction strategies in the public housing environment. Therefore, it is impossible to predict with much certainty the effectiveness of any single strategy or combination of socially oriented strategies.

SELECTED GOVERNMENT AND LOCAL PUBLIC HOUSING MANAGEMENT POLICIES

The third group of factors that the literature suggests contribute to the problems of crime in and around public housing are what we have labeled "Selected Government and Local Public Housing Management Policies." Participants at both the NAHRO and AIR Conferences discussed a variety of Public Housing Authority regulations that serve as barriers to creating and maintaining effective security programs. The major government policy addressed is the lack of adequate and stable funding for public housing security programs.

Lack of Adequate and Stable Funding

In many cases, the primary responsibility for providing security personnel to public housing complexes rests with the local Public Housing Authority. Arrangements do exist in some locales by which the local Public Housing Authority uses local law enforcement agencies either through a contract or a non-pecuniary arrangement with the local, county, or state government.

Local Public Housing Authorities rely on a variety of funding mechanisms to staff their program. Sources of funds mentioned in papers presented at the NAHRO/HUD Conference included the following:

- HUD Security Program funds
- LEAA grants (Department of Justice)
- CETA (the federal employment program authorized by the Comprehensive Employment and Training Act--Department of Labor)
- HCDBG fund (Housing and Community Development Block Grant)
- General Revenue Sharing
- Local Public Housing Authority operating funds
- Local, county, and state government matching grants
- Local training opportunities provided as a contribution by local law enforcement agencies
- Other funding sources

Participants at the NAHRO/HUD Conference noted that the use of a variety of funding sources, many of which make monies available for only one year, contributes to an instability in force size for Public Housing Authority security personnel, makes successful coordination of such a security operation difficult, and prevents long-range planning and intensive training.

The literature has also documented other problems related to security personnel in and around public housing. Rosenthal (1974-1978), Perlgut (1978), Newman (1973), Brill (1974-1978), Bridges (1973), and many others have written about the need for additional security staff in public housing complexes. Recently, the debate in the literature has focused on the need for increasing the effectiveness of security personnel in addition to increasing their numbers. Poole (1978), Perlgut (1978), Costales (1978), and others suggest that what is needed to improve effectiveness is that security personnel (1) receive adequate training, (2) become culturally sensitive to the needs of the population they are attempting to serve, and (3) achieve a high degree of coordination and communication with local law enforcement agencies. The first two issues are discussed in the section on social factors, the third issue is addressed below.

*Lack of Effective Coordination and Communication
with Local Law Enforcement Agencies*

This problem has surfaced both in the literature on crime in public housing (Brill, 1978; Cooke, 1978; Rosenthal, 1974-1978; and others) and in the papers prepared by local Public Housing Authorities for the NAHRO/HUD Conference. There have been no large-scale studies of the relationship between the actual lack of coordination and communication and the high crime rates in public housing. However, there appears to be a consensus in

both the literature and among those who live and work in public housing that this problem contributes to the incidence of crime and fear of crime experienced by residents. A variety of strategies have been suggested to improve this link. One is to redirect all calls from residents and security personnel to a 24-hour central police dispatcher. This usually involves establishing an emergency telephone dialing system and informing local public housing residents and security personnel about its use. Other strategies designed to promote better coordination include joint planning sessions and regular meetings between the housing and law enforcement personnel.

These strategies that address security personnel-related issues have been undertaken in one form or another by a large number of Public Housing Authorities. There is general agreement that these security personnel issues are important to address in planning and implementing effective anti-crime programs. However, there is no general agreement regarding the potential effectiveness of any or all of these strategies. Generally, the papers presented at the NAHRO/HUD Conference and the work of Rosenthal and Allen (1978) support the position that combining several strategies --such as increasing security personnel staff size, its level of training, cultural sensitivity, and coordination and communication with local law enforcement officials--would, if implemented successfully and funded over a period of several years, tend to reduce crime in and around public housing.

Lack of Effective Anti-Crime Management Policies

The literature and the papers presented at the NAHRO/ HUD Conference support the position that the lack of effective anti-crime management policies may contribute to the problems of crime and fear of crime in public housing.

Rosenthal (1974) suggests that one essential management component that is lacking today is the capability of management (with the help of residents) to evict those residents who engage in anti-social behavior, including crime. A second management policy that Newman says is lacking is resident screening.

Newman's (1973-1977) research suggests that certain age groups, such as the elderly and the young, do not mix well in public housing environments. Statistics indicate that elderly residents are victimized more often in settings where there are youths present than when the entire complex is comprised of elderly residents. Brill (1974-1978) found that the elderly do have a high level of fear of victimization by youth.

Newman (1976) suggests that groups such as the elderly either be housed in separate complexes or in different areas within the same complex with living units separated from those of families with children. Newman (1976) makes one other point regarding the desirability of having persons of "uniform life style and age group" reside together. He states that this will have the effect of promoting resident recognition, association, social cohesion, and organization. Though we find little empirical evidence to support or refute that statement, the arguments both for and against housing uniform age groups together are worthy of mention.

The argument against housing uniform age and life style groups together is twofold. First, by removing the elderly from areas with children and youth, important elements of surveillance and informal social control are lost. Second, the interaction of old and young can have the effect of deterring anti-social behavior due to potential caring attitudes that may develop between members of each group and due to the role models that the elderly can serve for youth (Glaser, 1978).

The debate is certainly not whether elderly persons who want to live by themselves should be allowed to do so, but rather whether elderly residents who do not fear victimization by youth should be allowed to reside in buildings that are primarily occupied by families with children.

Though the question has not, as yet, been phrased this precisely in the literature, the arguments for the elderly potentially providing surveillance, role models, informal social controls, and caring attitudes towards youth all seem to favor allowing the elderly, if they so desire and if they are made aware of the higher probability of victimization, to live in public housing shared by other groups.

The strategies discussed under the term "management policies" may have potential in reducing crime in and around public housing. Too few examples of empirical evidence testing these approaches exist for us to predict the level of effectiveness each strategy or all of these strategies in combination could have on the level of crime in and around public housing. The logic behind many of these approaches is strong. However, there are limitations to these strategies that should be recognized. First, these policies, especially eviction, may be very difficult to implement and manage. The legality of it in some areas may also be in question. For example, in the paper presented at the NAHRO/HUD Conference by the Public Housing Authority of Columbus, Georgia (1978), it is stated that:

Recent court cases, revisions to the landlord tenant laws, and the Legal Aid Society have virtually destroyed our traditional tool, eviction. Since we [the Public Housing Authority] must prove beyond a reasonable doubt the guilt of undesirable tenants, we must have at our disposal a trained staff of investigative and enforcement personnel.

In addition to legal problems, there could also be political problems that would arise when a Public Housing Authority evicted someone who did not have another place to live. Political problems could also arise from instituting screening policies and separating age groups.

There are strategies discussed under other headings that could also be described as management policies. These would include the role of resident participation, security personnel issues, and delivery of social services to residents.

ANALYZING APPROACHES TO CRIME PREVENTION

Many of the physical and social strategies as well as public housing management tools presented above have been planned or implemented as elements of one of the more integrated approaches that are discussed in the literature. We have selected five of these integrated approaches for further review. These particular practitioners were selected first because they incorporate, to a lesser or greater degree, many of the social and physical strategies into their crime reduction approach. Second, these practitioners are not only represented in the formal literature but they also had their ideas tested in Public Housing Authorities and in urban neighborhoods.

The five integrated approaches that will be reviewed in the next section include "Defensible Space" (Newman); Environmental Security Planning (Gardiner); Comprehensive Security Planning (Brill); Turf Reclamation (Rosenthal) and Crime Prevention Through Environmental Design (CPTED) (Westinghouse National Issues Center).

The preceding discussion of physical and social factors, though not exhaustive, does demonstrate the multiple problems for public housing authorities in selecting the most appropriate set of strategies for crime prevention. Figure 1 offers an opportunity to compare the approaches of some of the leading practitioners. By making this comparison, we can delineate the points of emphasis given by these practitioners to various social and physical factors influencing crime in public housing.

Too often crime in public housing will run its course before suitable strategies are selected and implemented. Our review of the literature and the proceedings of the September NAHRO/HUD Public Housing Security Conference suggests that housing authorities need a better and more usable understanding

Figure 1. Social and Physical Factors Addressed by the Selected Practitioners

	Physical Factors						Social Factors						
	Surveillance	Access control	Adequate locks, frames	Clearly defined areas	Conflicting user groups	Circulation and transportation	Social organization and cohesion	Proprietary interest territoriality	Security personnel	Social services	Resident employment	Supervision and organized activities for youth	Public housing management
Defensible Space (Newman)	■	■	●	■	■	■	●	■	●	-	●	●	■
Environmental Security Planning (Gardiner)	●	■	●	■	■	●	■	●	●	●	■	-	-
Comprehensive Security Planning (Brill)	■	■	●	●	●	■	■	■	●	■	●	●	■
Turf Reclamation (Rosenthal)	●	●	●	-	-	-	■	■	■	■	●	■	■
Crime Prevention through Environmental Design (Westinghouse)	■	■	■	■	●	●	●	●	●	●	●	●	-

● - Practitioner has identified this as a contributor to crime problem and incorporates strategies to address this issue in the community

■ - Practitioner has devoted considerable attention to this factor

of the potential crime strategies that could be employed in public housing. For Public Housing Authorities (PHAs), tenants, municipal agencies, HUD, Law Enforcement Assistance Administration (LEAA), Department of Labor (DOL), ACTION, and other federal agencies, the problem of appropriate strategy selection and implementation is a serious one. A full sharing of experience and discussion of the leading approaches in the field left the participants of the NAHRO/HUD Conference wondering aloud about several questions. If crime is to be reduced, who should do what? What should be the shared responsibilities among HUD, the PHAs, tenants, and the municipality? How does one take the research done by Newman, Brill, and others and make sense of it? What should be made of data? How should analysis be used? Is all of this research a waste of time?

This set of questions combined with our review of the literature has convinced us that a comprehensive approach to crime prevention, utilizing the best experience of each of the leading practitioners, would be an important next step in the development of crime prevention activities in public housing.

As we indicated at the beginning of this chapter, five current approaches will be reviewed. They are: Defensible Space, Environmental Security Planning, Comprehensive Security Planning, Turf Reclamation, and Crime Prevention Through Environmental Design. The choice of criteria by which we analyze the various crime prevention approaches is crucial to the selection process that will hopefully result in a comprehensive approach to crime prevention in public housing. The questions are: What are the key factors that HUD should consider in comparing alternative approaches? What kinds of programmatic decisions can the knowledge generated by practitioners enable HUD to make?

From the literature, interviews with practitioners, and an analysis of the NAHRO/HUD Conference, five criteria are suggested as a point of departure. The use of this method of analysis and comparison has advantages and disadvantages. An advantage is that one can compare the areas of emphasis of each of the leading approaches. The major disadvantage is that dissecting an approach into five categories may pay too little attention to the differences and ideosyncracies among the various approaches. With this caveat, each approach will be reviewed using the following five criteria:

1. The Use of Data, Mapping Techniques, and Systematic Research Methods: For example, what kinds of data are used and for what purpose? What kinds of analyses of data are performed?
2. Physical and Social Factors Associated with Crime: Specifically, to what extent are the physical and social factors which are addressed above in this paper incorporated into the crime reduction strategies?
3. View of Citizen Involvement: To what extent does the practitioner view citizen involvement and the use of residents as resources for crime prevention?
4. View of Integrated Approaches: To what extent does the practitioner employ integrated approaches to reduce crime?
5. Shared Responsibilities and Role Definition: In particular, to what extent does the practitioner deal with shared responsibilities and role definition between HUD, PHA, local agencies, and the residents?

Each of the criteria will be discussed. Then, each of the five approaches will be considered from the perspective of each criterion.

Criterion One:

The Use of Data, Mapping Techniques, and Other Systematic Research Methods

The literature suggests that decision makers must have good information regarding the crime problem in a particular

public housing complex before appropriate strategies can be developed. More specifically, information regarding offender groups and victims is important. The further a PHA goes in measuring the extent of the crime problem, mapping the locations of crime, and assessing the points of vulnerability in the physical public housing structure, the closer the authority is to an adequate problem definition and, potentially, an adequate solution.

In addition to the importance of data, the literature also cautions us about the use of that data for strategy development. If data assessments miss the point or are sifted by the presumptions and values of middle-class practitioners, results can be disastrous. Honigmann (1969) discusses the risk of the middle-class researcher providing interpretations that omit concepts that are essential to the lives of the people being studied.

Given these possible limitations to the use of data in public housing environments, we shall discuss several data gathering techniques which can be employed effectively in the study of crime in public housing. We will cover four general methods together with their varying objectives. The methods are: the Sample Survey, Behavioral Observation, Key Person Analysis, and the Critical Incident Technique.

The Sample Survey

In the study of crime in public housing, one of the most widely used research techniques is the sample survey. Sample surveys have been used to obtain information about the respondent; information about past, present, or planned behavior; information about beliefs and attitudes; and person interpretations of reasons underlying specific behavior. Surveys may be conducted of the population at large, or of residents of particular neighborhoods, public housing complexes, or other specific groups. They can be based upon random samples or

selective samples of different kinds. In any case, interviewers must be trained; and the survey instrument must be carefully designed and consistently administered.

As stated above, in the context of public housing, surveys are the most common research method employed to assess perceptions of the crime problem and opinions about different strategies. They provide a basis from which to assess the costs and benefits of specific strategies. A particular type of survey, the victimization survey, has been utilized to estimate "actual" crime rates versus those based on the limited number of offenses that are actually reported to the police.

Behavioral Observation

The objective of behavioral observation is to determine how individuals interact among themselves and with the physical environment. Observation, both of the physical environment and the behavioral characteristics of individuals in that environment, can be an informal starting point for more rigorous examinations of initial problems and, later, the effectiveness of problem-reduction strategies. Although the method can generate useful data, it is difficult to apply systematically. It addresses more the qualitative than the quantitative nature of individual behavior.

Key Person Analysis

Another type of selective interviewing is called the key person analysis (Rouse, 1978). It is a technique for dealing with problems of access and validity in doing research in difficult environments, e.g., those in which residents are reluctant to be interviewed or in which interviewers may be uncomfortable. It incorporates elements of both field work and survey research. By applying field work techniques which previous investigators have used to supplement the survey,

this method may provide a correction for some of the limitations of traditional survey approaches in the public housing environment.

Its primary limitation as a research tool is that the sample of persons interviewed is weighted toward the community's activists, the more visible members of the community and probably those more aware of the issues than the average public housing resident. Therefore, the results cannot help but be somewhat biased.

Nevertheless, this process, which is used in some form by all of the major practitioners, has unmistakable virtues: (1) respondents generally accept that researchers are there in good faith and for a legitimate purpose; (2) the sample includes the people who are most knowledgeable about the issues in question; and (3) the data generated can be used to complement data available in published reports such as official crime statistics.

Critical Incident Technique

The critical incident technique is also potentially useful. This technique requires participants to provide detailed descriptions of actions they perceive to be effective and ineffective in particular circumstances. For example, participants could be asked to think of their most recent positive or negative experience with public housing. They would be asked to describe in precise terms:

- the specific situation and factors leading up to it
- the specific behavior performed that led to the effective or ineffective results
- the specific reasons this behavior led to the results

The effectiveness of the critical incident approach derives from two major characteristics. First, it distills from the countless number of observations that individuals

make in the course of their daily lives those that are "critical" in producing a certain significant outcome. Respondents are asked to report events that meet this criterion of tangible, significant consequences. Reports that do not meet it are discarded from the data.

Thus, there are several types of data collection and analytic techniques that have been used in conducting research in the public housing environment. In our review of each practitioner, we briefly discuss these in two contexts. First, we review the use of data in the development of the particular theoretical basis of the approach. Second, we review the use of data in the problem analysis stage in developing specific sets of strategies to reduce crime.

Criterion Two:

Physical, Social, and Other Factors

Physical, social, and other factors discussed in Chapter 1 of this report represent a second dimension used in the review of the work of five major practitioners in the field of crime reduction.

Through reviewing the extent to which each practitioner's approach addresses the physical, social, and other factors cited as contributing to the crime problems in public housing, we gain a perspective regarding the "comprehensiveness" of their approaches. The physical, social, and other factors to be considered include:

Physical

1. Lack of surveillance
2. Lack of adequate locks, door and window frames, alarms, etc.
3. Lack of access control
4. Lack of clearly defined areas and physical facilities on the grounds
5. Existence of conflicting user groups and uses of public housing grounds
6. Lack of adequate circulation patterns and transportation services and facilities

Social

1. Lack of social organization, social cohesion, and informal social control
2. Lack of proprietary interests and territoriality among residents
3. Lack of adequately trained, culturally sensitive security personnel
4. Lack of effective anti-crime management policies
5. Lack of social service and crisis intervention programs to address social problems of residents
6. Lack of supervision and organized activity for youth
7. Lack of employment opportunities for residents

Selected Government and Local Public Housing Management Policies

1. Lack of adequate and stable funding
2. Lack of coordination and communication with local law enforcement agencies
3. Lack of effective anti-crime management policies

Criterion Three:
Integrated Approaches

The need for an integrated approach to crime prevention is discussed by Freedman (1975) in *Crowding and Behavior*. Freedman discusses the importance of design as only one of the important contributing factors in the quality of life of persons residing in high-density environments.

If the situation can be structured so that people do not feel isolation, if they feel friendly and open...if they get to know and trust their neighbors, the high density should intensify these positive feelings...

Freedman goes on to say that if the social situation is non-threatening, buildings can be designed to foster positive reactions, regardless of density. If, however, the social situation is fear-producing or lacks a sense of community or territorial attitudes on the part of residents, physical design changes alone will have minimal impact. In effect, Freedman states that when people feel cut off, defensive, afraid, and powerless, building design changes can be expected to have little effect on residential willingness or ability to deter crime and anti-social behavior in their environment.

Our use of the term "integrated approach" is defined as the use of an internally consistent, mutually reinforcing set of crime-reduction strategies. Therefore, we view an approach as "integrated" if the social, physical, security, and management strategies suggested complement one another. An example of this would be the use of a physically oriented strategy--access control--with a complementary, socially oriented one such as employing residents (including youths) to serve as guards or doorpersons.

Simply redesigning public housing to improve social organization, social control, or informal social controls, or to stimulate a sense of proprietary interest or territoriality, has not been shown to cause public housing residents to act more responsibly. The reasons for this are obvious to the observer who looks at the social elements as well as the physical in analyzing the public housing environment. Historically, residents of public housing have not viewed social interaction as very sensible. As members of a subculture, cut off from the larger society, dominated by poverty, living with great distrust and lack of knowledge of their fellow public housing residents, they perceive "social interaction" as potentially threatening to their survival. It seems entirely reasonable, then, that public housing residents ignore strategies to stimulate social interaction that use only physical design changes and do not reflect an understanding of the social conditions in which residents live.

The literature, the papers presented at the NAHRO/HUD Conference and discussions held at that conference all support the use of integrated approaches to crime prevention in public housing environments. The position consistently held is that physical design changes or social service changes alone have little chance in today's public housing environment to reduce the level of crime and fear of crime substantially.

*Criterion Four:
Citizen Involvement/Residents as a Resource*

A fourth dimension used in reviewing the major practitioners is the reliance on citizen involvement and the recognition of residents as a potential resource in crime reduction efforts. There is growing support in the literature, including the Summary Report of the Hartford Demonstration, for the position that residents have a major role to play in all phases of crime prevention activity--problem definition, strategy development and implementation, data collection and analysis, and evaluation. Our earlier discussion of cultural bias, the peculiar nature of public housing, and the potential resource that residents represent seems to make such involvement essential. This position is supported both by the papers for the NAHRO/HUD Conference and by the presentations made there by various groups--including PHA personnel, security directors, planning and social service staffs, and residents. In addition, the participants of the AIR Conference on Crime and Public Housing also agree that residents of public housing must participate directly in any crime reduction program in order for it to be effective. In effect, all of these sources state that a requirement for effective crime-prevention programs in the public housing environment is that residents function as full participants in each phase of the crime reduction effort.

The importance of citizen involvement has been recognized by some local Public Housing Authorities. The Chicago Housing Authority and its efforts in crime prevention in the Cabrini-Green High Impact Program (HIP) is one example. The \$22 million Cabrini-Green High Impact crime prevention program identified residents as the cornerstone for successful crime prevention.

The paper prepared by the Chicago Housing Authority (1978) for the NAHRO/HUD Conference states:

CHA and the other HIP agencies soon realized that program success depends on involving residents in all aspects of development life-- from participating directly in security and management decisions [to the] delivery... of the many educational and recreational services and activities.

The Cabrini-Green HIP was implemented in 1975 and has led to a significant reduction in crime and fear of crime by residents. Tenants played an active role in the Chicago HIP from the planning stages, through operations, to evaluation.

Residents are also being utilized as employees working in the program. All safety aide and other paraprofessional security positions were filled by residents. Residents patrol their own buildings, hallways, elevators, lobbies and corridors. They also supervise children to and from school, assist victims and work with police when appropriate. The CHA stated that social services and counseling services for victims have been improved with the employment of residents, with their first-hand knowledge and insight into delivery of social services. Of the 87 security, management and social service staff hired by CHA under the HIP, 64 (74%) are residents of Cabrini-Green. Employment has, according to CHA, done more than increase resident investment in the success of the program. Resident participation has also contributed to improved management of Chicago public housing complexes. Managers are provided with immediate and accurate feedback regarding residents' response to various programmatic strategies under consideration.

The Housing Authority of Baltimore City (1978) also places emphasis on the importance of citizens. The paper pre-

pared by the Authority for the NAHRO/HUD Conference states:

Our basic philosophy is to include residents in the decision-making process, as much as possible, in order that the services we provide meet their needs.

In order to achieve resident participation, a Resident Advisory Board Security Committee has been organized to identify security needs and provide recommendations on security strategies. Security issues are also discussed with the Tenant Council at tenant management meetings. HABC also uses resident surveys when controversial issues are up for decision. Resident security guards and aides are also employed.

Similar experiences are reported by the Pittsburgh Public Housing Authority, the Dade County Department of Housing and Urban Development, the Housing Authority of New Orleans, and others.

This discussion suggests that effective crime reduction strategies in public housing should utilize residents as a principal resource for crime prevention activities. Furthermore, as discussions at the NAHRO/HUD Conference clearly showed, residents of public housing *resent* not being allowed to give input into the planning and implementation of crime prevention activities. Participants recognized that getting large numbers of public housing residents active in crime prevention would be difficult. This involvement, they felt, was necessary and--if given proper support--was also feasible.

The key to utilizing resident skills for survival as a guide to crime prevention is an understanding of, and a

respect for, residents' coping skills. Rainwater (1970) speaks to this issue:

A close look at lower-class life must impress the observer with the human creativity that goes into the effort to survive. Two particular aspects of these adaptations are important to our analysis. Lower-class styles of life are heavily oriented to defense against the many dangers presented by this world. Techniques of relating to other people are markedly defensive; individuals manipulate and exploit others where possible and at the same time try to ward off manipulation and exploitation by others. This contributes a pervasive tone of guardedness and mistrustfulness to interpersonal relations within the community. Defensiveness also permeates the self-esteem of lower-class people, encouraging them not to care too much about anything because it may be taken away at any moment, hopes are more often frustrated than realized, and one never knows how much to count on other people.

Substantive involvement by citizens in crime prevention is supported by a broad spectrum of the literature, including the report by the National Advisory Commission on Criminal Justice Standards and Goals (1974) and the works of Krop (1976), Washnis (1976), and Misner (1973).

The primary evidence in the literature in support of the use of residents is from case studies of selected areas. For example, citizen involvement is assessed favorably in the recent evaluation report of the Hartford Anti-Crime Program. In addition, Fowler et al. (1978) describe the valuable linkage functions provided by residents in that anti-crime program.

Police and citizens can facilitate the other's success in opportunity reduction. Citizens, as noted, can communicate to

police places or events where police are needed. In turn, police can play a part in stimulating citizen surveillance and if police are aware of citizens' fears and concerns, they can be responsive to requests for service in ways that may reduce fear and increase citizens' use of the neighborhood.

The Hartford experiment, according to Fowler, also recognized the need to develop mechanisms to insure effective citizen participation. Many of those participating in the design of the Hartford experiment suggested that an increased citizen role in opportunity reduction would be a direct result of the physical changes suggested. This position did not prevail, and the Hartford Anti-Crime Program actively enlisted the support of community-based organizations to facilitate citizen participation in the planning and implementation of physical changes.

Based on the literature, papers presented for the NAHRO/ HUD Conference, and the presentation made by participants at that Conference, there is little doubt that some form of citizen and resident involvement is essential in planning and implementing effective crime prevention activities.

*Criterion Five:
Shared Roles and Responsibilities*

Neither the general literature nor the writing of the particular practitioners reviewed addresses the issue of shared roles and responsibilities with regard to the key groups involved in crime prevention activities in public housing. This seems to be a serious omission, since many of the participants at both the NAHRO/ HUD Conference and the AIR Conference stated that the lack of clearly defined roles was a major issue with regard to implementing effective crime reduction strategies. In the discussions during both conferences, there was agreement

that a successful security program must provide for close co-operation and participation of all the involved parties including HUD, the municipality, the local police department, on through to the residents.* At the NAHRO/HUD Conference, participants suggested a sharing of roles and responsibilities between those who live and those who work in public housing. At the AIR Conference, participants also discussed the need for sharing roles and responsibilities among local agencies, community organizations, and others in the community that would become involved in the program.

Department of Housing and Urban Development

The view among conference participants was that HUD had the major responsibility for the provision of security. HUD, it was thought, had a great amount of control and influence over the nature of public housing through financing and the creation of design and program guidelines.

Discussion centered around the idea that HUD must recognize that security is an integral part of all aspects of public housing. Security, conference participants felt, is not simply environmental design, such as "target hardening" techniques or security guards, but it is tied in with all the social conditions and mental attitudes of public housing management and residents. Conference

*Before discussing this criterion, it should be noted that each of the practitioners has worked in consulting arrangements where each had a particular employer (HUD or a Public Housing Authority) which sought specific information regarding the crime problem. Since each author may have not been requested at any time to devote considerable attention to developing appropriate sharing of responsibilities among key groups, in the application of his approach, we are not criticizing the approaches for this omission. The review of each approach using this criterion is helpful in identifying the position each approach takes and the current state-of-the-art with regard to developing role definitions and models for sharing responsibilities in crime reduction efforts.

participants believed that the implications for security issues must be taken into account in all HUD actions concerning public housing.

A primary responsibility of HUD to the PHAs, as voiced at the NAHRO/HUD Conference, is to provide adequate funding for security programs. As it is now, there are only limited funds available for short-term demonstration projects. The consensus of the conference was that HUD must develop sustained sources of funding at levels that will allow for effective security programs. This sentiment was stressed repeatedly throughout the conference. Security programs, for which the funding is ended just as the planning and training phases end, make little impact on the incidence of crime. Many people believed that, as a result of earlier research and demonstration projects, many of the elements of successful security programs are now known so that the time has come to shift the emphasis from research and development to implementation in all public housing.

Local Governments

There was an overall consensus that the local governments must insure the provision of adequate municipal services to all city residents, including tenants of public housing. It is a vicious circle: as the criminal activities increase in public housing, staff of city departments such as recreation, sanitation, social services, and police are reluctant to enter public housing developments. Yet, the absence of these services encourages building deterioration, youth dissatisfaction, residents conflicts, and an environment which is conducive to crime.

Cities are financed in part to provide many of the above-mentioned services. Housing authorities, with their more limited resources, are unable to provide their residents with these necessary services--especially those related to social issues.

One suggestion developed during the NAHRO/HUD Conference was that city officials be brought into the planning process of public housing security programs. The city must agree to aid in providing some of the more critical program elements, such as activities for youth, counseling, referral to social services, and increased police surveillance.

Local Police Departments

While police departments operate under the authority of local governments, their services were thought to be specific enough to public housing needs to warrant special emphasis during the conference.

Some conference participants felt that public safety is basically the responsibility of the local governments. Because public housing residents are also citizens of the locale, they are entitled to the same protection as the rest of the community.

In many cities (e.g., Newark), local police units provide very limited or no protective services whatsoever to public housing projects. Quite frequently, they have too few staff to adequately patrol these developments, and response time far exceeds the norm. Conference participants placed considerable emphasis on having police who are sensitive to the kinds of problems faced by residents in public housing. They wanted to see the effort of local police and residents coordinated. Residents, they felt, should be consulted by police for their advice and suggestions on hardware, social program components, and preventive strategies to be tried, in order to insure acceptance and effectiveness of police actions in these areas. In addition, the view was expressed that local police must make more of an effort to carry out their duties in public housing and to promote resident involvement in their activities.

Most of the NAHRO/HUD Conference participants agreed that PHA staff saw their roles in public housing security as those of regulators and managers. The PHA executive directors viewed their role as being the focus of authority, planning, and program development for security. This broader view was not completely shared by the security directors who thought that they should have responsibility for planning. They did concur, however, that authority over security should be vested in PHA executive directors.

PHA administrators felt that, since they were responsible for the overall management of housing developments and since security plays such an integral role in all housing activities, they were better equipped to administer security programs. They therefore believed that the following implementation activities were among their responsibilities: (1) the securing of hardware items; (2) staffing the programs; (3) coordinating efforts between the different actors involved (police, tenants, HUD); (4) serving a liaison function between local agencies and security; (5) serving as an advocate for residents and enlisting their participation; (6) participating in the monitoring of programs and evaluations of program effectiveness; (7) assuming the legal responsibility for security hazards; and (8) acting as an advocate for public housing issues and security interests in the courts.

There was agreement among those attending that a close cooperation and information exchange network must be established and maintained between security staff and local police. This was thought to be essential if security is to receive support and back-up service from police departments.

A majority of security staff directors participating in the conference felt that the role of a security staff member should be that of a trained, professional law enforcement officer. They believed that they should have full policing powers--including carrying a weapon and arrest authority. Without these, they considered security patrols to be ineffective in keeping the peace. In some instances, local police departments are reluctant to allocate full authority to security staffs. This was seen as a further reason for close cooperation between police and security forces.

Public Housing Residents

There was agreement among a majority of those attending that for a public housing security program to be successful, residents must play a major role in its design and implementation. PHA officials, project managers, security personnel, and tenants all felt that, from the very beginning, efforts should be made to elicit both the tenants' perceptions of their security needs and how they believe that these needs can best be satisfied. However, some of the tenant representatives at the NAHRO/HUD Conference envision a much larger role for public housing residents. Their opinion is that the residents, through tenant boards and organizations, should have final authority over security programs and the funds which are allocated for each development.

The uses of resident volunteers were discussed several times during the conference. Though it was agreed that there must be resident support and activism, there was a difference of opinion as to how much residents should be asked to do.

One group of residents wondered why poor people are always the ones who are asked to volunteer. They said that many

public housing residents, especially single mothers, are already burdened with too much to do. One suggestion was that if residents are asked to volunteer on security patrols, or as block watchers, they should be offered some financial incentives. If money is not available for salaries, then a system of rent credits might be used.

Another group of residents felt that security patrols should consist of unpaid volunteers. They were afraid that if the volunteers received pay, they would become an arm of PHA rather than representing tenant interests. Furthermore, residents perceived their role to be even broader than that of a police officer and to include social service referral functions.

All tenants agreed that they must have greater influence on program design and more say in the decision-making process. They wanted more than just to be surveyed and then told what their roles are to be. Tenants indicated that they wanted to be included from the moment efforts began until crime is no longer a problem. In fact, in several of the PHAs participating in the conference, it was the tenants who were the initiators of security programs. It was pointed out that tenants have as much expertise in public housing security issues as do many consultants, and it has cost the tenants much more personally to gain it. One suggestion was that some tenants should be paid for their services, as are consultants, during the planning phase.

Summary

We have established a set of criteria by which to review five of the major practitioners in the field of reducing crime in public housing and urban neighborhoods. The five dimensions

suggested by the literature as important aspects of a comprehensive and effective anti-crime program include: (1) the use of data, mapping techniques, and systematic research methods in the development of the crime reduction strategy; (2) the extent to which each approach addresses the social and physical factors raised in the literature as potential contributors to crime; (3) the extent to which each of the practitioner's strategies represents an integrated approach to reducing crime in and around public housing; (4) the use of citizen involvement and the recognition that residents are an important resource in crime reduction efforts; and (5) the extent to which clearly define roles and responsibilities are delineated for all groups involved in the crime prevention effort.

Our review of the practitioners begins with Newman and continues with a discussion of the work of Gardiner, Brill, Rosenthal, and finally the Westinghouse National Issues Center. As stated earlier, this ordering has been made for internal organizational purposes and does not suggest any prioritizing.

FIVE CURRENT APPROACHES

Introduction

Each of the five practitioners will be examined on the five criteria specified. Comprehensiveness will not be treated as an indication of value or lack of value of an individual strategy. Indeed, each of the practitioners to be considered has represented a different emphasis and logically so. Newman, an architect, primarily pursues physical change of the environment; Gardiner, an urban designer, emphasizes general land use and physical planning; Brill, a social scientist, emphasizes methodology and assessment technique and social programs; Rosenthal, the social activist, emphasizes citizen interaction; and Westinghouse, the management group with a broad range of practitioners, emphasizes a more integrated and comprehensive approach. If assessed independently, none of the strategies represents an approach adequate to meet all of the needs of crime prevention in public housing. Each of the individual practitioners shows major limitations in scope or depth.

On the other hand, each of these five has made, and can be expected to continue making, important contributions because each has developed a particular focus. It would have been entirely impossible for each of these approaches to address all the crime prevention needs of public housing. Based upon the review of the literature and the lack of evaluative data showing dramatic reductions in crime, we conclude that no practitioner or approach reviewed has the answer to reducing crime in and around public housing. The approach we have used to review each of the practitioners brings out the strengths and weaknesses of each. The responsibility for combining the best from each practitioner and developing procedures which will pull together this comprehensive approach rests with the federal government and its future research and demonstration activities. The assessment of the practitioners has been undertaken with a view toward learning lessons from their past efforts to reduce crime. (See Figure 2.)

Figure 2. CRITERIA

	Data	Physical	Social	Citizen Involve- ment	Integrated Approaches	Role Definition Shared Responsi- bilities
Newman Defensible Space	■	⊙	■	●	■	●
Brill Environmental Security Planning	⊙	■	⊙	■	⊙	●
Rosenthal Turf Reclamation	■	●	⊙	⊙	■	●
Gardiner Comprehensive Security Planning	■	⊙	■	■	■	●
Westinghouse Crime Prevention through Environmental Design	■	■	■	■	⊙	■

⊙ = Heavy use; develop new approaches

■ = Moderate use

● = Minor use

Oscar Newman's approach to reducing public housing crime has evolved from his research on the application of physical and social crime reduction strategies. The "defensible space" concept has been the central theme of his work. Defensible space, as Newman defines it, is an area within a residential complex or neighborhood where physical design characteristics allow residents to assume primary authority for insuring safety. Newman explains further:

By grouping dwelling units to reinforce association of mutual benefit (social clustering, social cohesion); by delineating paths of movement (circulation and transportation); by defining areas of activity for particular users through their juxtaposition with internal living areas (spatial hierarchy, differentiated space, landscape); and by providing for natural opportunities for visual surveillance (lighting, design features), architects can create a clear understanding of the function of a space, who its users are and ought to be. This, in turn, can lead residents of all income levels to adopt extremely potent territorial attitudes and policing measures. (Newman, 1972)

Early application of Newman's physically oriented crime reduction efforts took place in four public housing projects in New York and will be discussed below.

Newman's research and development activities as Director of the Institute for Community Design Analysis led to three major publications in the early 1970s--*Defensible Space*, *Architectural Design for Crime Prevention*, and *Design Guidelines for Creating Defensible Space*. These works have been lauded for their theoretical discussion of physical-social phenomena and their technical guidance on physical design changes that "promote" crime reduction behavior.

In addition to directing research activities, he has recently worked with several Public Housing Authorities, including those in Columbus (Ohio), Oklahoma City, and San Francisco. In each of these areas, physically oriented crime reduction strategies were employed. In at least two of the cities, notably Oklahoma City and San Francisco, social strategies were also recommended by Newman. These strategies also included changes in management policies, such as tenant selection and use of resident managers. Unfortunately, there are few published materials describing Newman's recent efforts and no rigorous evaluations of the impact these changes may have had on crime rates.

Data

Newman's initial testing of defensible space hypotheses, using empirical data, began in the late sixties and early seventies. Some of this research is presented in *Architectural Design for Crime Prevention*. Methods of data collection and analysis used by Newman which lend support to defensible space hypotheses include surveys of public housing residents in New York which collected victimization and fear of crime information. These surveys also investigated the relationship among specific geographical locations, other physical characteristics of the public housing environment, and crime and fear of crime levels among residents. In addition, a comparative analysis of paired buildings was undertaken, attempting to test the relationship between physical design characteristics and crime levels while controlling for possible intervening variables such as socio-economic characteristics of residents. Each of these research efforts conducted over the past five years has contributed support for Newman's defensible space theories.

Another example of Newman's research that has yielded findings in support of defensible space hypotheses is concerned with factors that affect crime levels and stability (turnover) in federally assisted housing. This study, being conducted

for the Law Enforcement Assistance Administration, includes a household survey of over 2,600 public housing residents using (1) a victimization survey developed by Newman; (2) interviews with public housing managers and local police; and (3) collection of archival data including crime rates, resident characteristics, physical design characteristics, and selected management policies in federally assisted housing in Newark, San Francisco, and St. Louis. Preliminary findings show that crime rates are positively correlated with such socio-economic and demographic characteristics as percentage of recipients of Aid to Families with Dependent Children and teen-adult ratios. In addition, the study's early findings lend support to defensible space hypotheses by showing correlations between crime rates and the physical forms of the buildings studied. Much of the data collected on housing management policies and their effect on crime rates have not been analyzed to date.

Newman's research institute has recently begun a study for the National Institutes for Mental Health investigating the relationship between public housing design and anti-social behavior among children and youth. Defensible space hypotheses will be tested through a detailed analysis of the relationship between building design, real and "felt" (perceived) supervision of children, and the level of anti-social behavior among children and youth.

Thus, Newman's general defensible space hypotheses are supported to some extent through the use of data, mapping techniques, and systematic research methods. While we find that defensible space hypotheses have some empirical support, several gaps remain in the empirical base of the theory. Newman has identified one area where data are lacking--the relationship between physical design and the problems with anti-social behavior among youths in public housing. A second gap remains as there is no empirical evidence conclusively demonstrating that potential offenders perceive "defensible space" as Newman

suggests they do. Thus, a critical question remains--namely, whether offenders are aware of and react to increases in surveillance opportunities, access control strategies, circulation patterns, and the other physical changes that Newman recommends contribute to creating defensible space.

A second area reviewed with regard to Newman's use of data, mapping techniques, and systematic research methods is the use of these tools in his development of crime reduction strategies for individual public housing complexes.

Extensive data were collected prior to the implementation of defensible space strategies in the Clason Point, Bronxdale, and Markham Gardens public housing complexes in New York City and were used by Newman in the development and selection of the strategies applied in those environments. More recently, although Newman has recommended security-oriented strategies in several public housing complexes, we find that there is little, if any, discussion in Newman's published writings outlining his use of pre-implementation data collection, crime location analysis, or systematic research into the problems of crime in and around the public housing complex. (Oklahoma City is one exception.)*

Newman's earlier work, *Design Guidelines for Creating Defensible Space*, gives us the general approach he uses in his analysis of public housing environments.** Thus, some published information currently exists with regard to the decision-making

*We realize that this data collection and analysis require funding, and the housing authorities for whom Newman has worked may not have made funds available for this type of data collection or analysis.

**See especially Chapter Five, "Design Guidelines for Creating Defensible Space," and the discussion of the decision-making process that Newman employed in determining the appropriate physical design for high-rise residential complexes and row-house developments in Newark and Indianapolis.

process Newman employs in determining the appropriate set of crime-reduction physical design changes. However, without more published information on a case-by-case basis of the crime related problems that Newman's planning process has discovered and the physical design changes recommended, we cannot describe in any greater detail how Newman has used data, mapping techniques, and systematic research methods to develop security-oriented recommendations and strategies for the public housing complexes where he has recently worked.

Physical, Social, and Other Factors

In *Design Guidelines for Creating Defensible Space*, Newman discussed each of the physical factors raised in the literature as potential contributors to crime. Some of the physically oriented strategies that Newman has recommended include:

- Measures to increase surveillance such as lighting, additional windows, and moving activities into areas near pathways where surveillance opportunities are enhanced
- Measures to increase access control to residential buildings through (1) reducing the number of residents using an entranceway, (2) creating semi-public spaces near entranceways, (3) using door-guards, (4) electronic surveillance devices, and (5) intercom systems and other target hardening devices
- Measures to increase access control onto public housing grounds through real boundaries (fences, high shrubbery) and symbolic barriers (low walls and minor shrubbery)
- Measures to guide pedestrian flow through public housing complexes by redesigning circulation patterns and reducing unassigned space through creating courtyards and semi-public front or rear yards
- Measures to reduce conflicting uses of public housing grounds by separating potentially conflicting groups such as the elderly and youth

In addition to these physically oriented strategies, Newman has recommended a variety of social- and management-oriented strategies to reduce crime in public housing. They include:

- Management policies that use screening to obtain a more mixed population with regard to socio-economic and demographic characteristics and promote the separation of residents by age and life style groups
- Measures to involve residents to some extent in the management of public housing complexes
- Measures to increase the individual resident's sense of territoriality

This description of the physical, social, and management factors addressed by Newman shows that his approach, as characterized in the literature, relies predominantly on physically oriented strategies.

Integrated Approach

We defined integrated approach earlier to describe a set of physically and socially oriented crime prevention strategies that are both internally consistent and mutually reinforcing. Newman's early work relied almost exclusively on physical strategies and did not represent an integrated approach as defined. Newman has recently moved toward the development of an integrated approach through his recommendation of social- and management-oriented strategies as a complement to physical design changes. However, to the extent that Newman does not utilize a broad range of complementing physical and social strategies, his "defensible space" approach falls short of being a fully integrated one. A good example is presented in Newman's discussion of measures to address such social factors as the lack of social cohesion and territoriality. He suggests using the primarily physically oriented approach of access control--dividing large areas of

open grounds into smaller court yards, front yards, and back yards, refurbishing, and target hardening, while placing very little emphasis on such complementary, socially oriented strategies as the establishment and support of resident organizations, expansion of social services, and the creation of training and employment opportunities for residents.

Citizen Involvement

Newman's view toward citizen involvement in security efforts has varied over time. An early appraisal of Newman's use of citizen's involvement is provided by Kohn's evaluation of Newman's physical design changes at Clason Point and Markham Gardens in New York City. Kohn stated that residents were consulted with regard to the physical design changes to occur at Clason Point. However, the residents were not consulted at Markham Gardens. Kohn stated that not only were Markham residents poorly informed about the reasons behind the physical design changes, but they also held no role in determining design solutions. There was only one formal meeting with Newman, and only a few residents knew about it. "Their exclusion confirmed what residents were already inclined to believe: their viewpoint was not considered important; they did not have important responsibilities; and certainly had no control" (Kohn et al., 1975). Newman recently stated that the exclusion of residents at Markham Gardens was intentional and was, in effect, a test to determine the need for citizen involvement. Newman stated that the Markham Gardens experience has shown that when one plans or implements physical changes in a public housing environment, resident involvement and participation is important.

Recently, Newman has recommended that residents undertake part of the management responsibilities in an Oklahoma City public housing complex and take a more active role in security efforts.

In spite of the movement toward increased citizen involvement shown over the past few years, one does not get the impression from published writings that Newman's approach guarantees that residents have significant decision-making authority in either the problem analysis, planning, or implementation stages. Rather, the approach seems to suggest that consultants and public housing management staff take the lead in designing and planning crime prevention activities.

Shared Responsibilities

The writings of Newman, as well as those of several other practitioners reviewed here, do not address in detail the issue of defining roles and sharing of responsibilities among key groups in the development and implementation of crime reduction programs. Newman's writings do not outline the recommended roles that each of the key participants is to have in an effective security program. Although Newman's approach explains "what to do about crime" (recommended strategies), he pays little attention to describing how (or if) his approach utilizes each of the key groups of participants including residents, local government agencies, HUD, and security officers in each phase of the crime reduction effort.

CONTINUED

1 OF 2

Current Approaches: Gardiner

Richard Gardiner utilizes an approach to reducing crime which recommends combining changes in the physical environment with community participation, law enforcement activities, and other socially oriented strategies. Gardiner's previous crime-reduction efforts have been on the neighborhood- and city-wide scale rather than in public housing per se. His Environmental Security Planning Approach (E/S) emphasizes the development of a process that analyzes the relationship between crime and reinforcing urban support systems, the use of and control over an area by residents and others, and several other physical and social factors that contribute to the "crime-environment phenomenon."

The major crime-environment efforts conducted by Gardiner include participation in the neighborhood crime prevention project in Hartford, Connecticut, participation in the CPTED Program directed by the Westinghouse National Issues Center, and the development of an "Environmental Security Plan and Program" for the South Loop New Town In-Town in Chicago.

Gardiner prepared physical design plans for the Hartford and CPTED projects, suggesting alternative transportation and circulation patterns and land use strategies to eliminate environmental conflicts. In addition, Gardiner, in conjunction with others in the Hartford project, developed crime prevention activities that involved citizen participation, police programs, and other programs that are social in nature. In the South Loop project, Gardiner participated in the design of the Master Plan for a 3,000 unit mixed-use development that was to occupy a 50-acre area that was formerly railroad land. The Master Plan included Gardiner's Environmental Security Plan and a set of planning criteria and guidelines.

Data

Gardiner's environmental security planning approach collects and analyzes data on such elements as:

- Reported incidence of crime, type, and location
- Offender and victim characteristics
- Interview data from adjudicated offenders on their patterns of movement and perceptions of physical environment
- Demographic data on offenders, victims, and users of an area under study
- Victimization and attitude surveys gathering information on fear of crime and "actual" number and types of crime
- Collection and analysis of urban planning and design information regarding land use patterns, circulation and transportation, zoning and location
- Information on the extent of community programs and local law enforcement agency practices in a particular area of public facilities, parking lots, open spaces, residential units, boundaries and transition zones between varying uses of land, and the intensity of use of the land surveyed and areas adjacent to it
(Gardiner, 1976)

The collection and analysis of these data and the mapping of the location of crimes seek not only to analyze the physical areas where crimes occur, but also to understand the movement of offenders through an area to reach their destination. Based on analysis of the data on physical elements, social uses of the environment, patterns of movement, and locations of crime, Gardiner then seeks to identify the physical and social conditions that contribute to the crime problem and proposes changes to reduce the opportunity for crimes to occur.

Physical, Social, and Other Factors

Gardiner's Environmental Security Planning process incorporates defensible space hypotheses and combines these physically oriented ideas with some socially oriented strategies to reduce crime. Among the physical strategies employed by Gardiner are access control and the existence of conflicting groups of users competing for the same semi-public space. At the individual building or housing complex scale, Gardiner emphasizes adequate locks, alarms, and strategies, such as lighting, that promote surveillance. The extent to which his process addresses social factors is difficult to assess precisely due to the fact that Gardiner's approach has been complemented both in Hartford and with CPTED by more socially oriented strategies. His planning process as explained in his recent book, *Design for Safe Neighborhoods* (1978), does not investigate many of the social factors that we have discussed. Although his process calls for the building of community programs and strategies to stimulate a sense of territoriality and social cohesion among residents of the target area, Gardiner does not in his recent writings address such social factors as the lack of supervision and organized activity for youths or the need to create employment opportunities in the short run for the unemployed who live in high crime areas.

Integrated Approach

The E/S planning approach, as it applies at the neighborhood level, is an integrated *strategy* to the extent that the physical design and social changes resulting from the E/S process build upon and reinforce existing social, law enforcement, and community anti-crime programs. However, the E/S planning process as shown in *Design for Safe Neighborhoods* does not represent an integrated *approach* as the term applies to reducing crime in and around public housing. Gardiner's recent book does not discuss in much detail several key elements that are considered in the literature as important

ingredients of an integrated approach to crime prevention in the public housing environment. Specifically, some social factors suggested in the literature as contributing to crime--such as lack of employment opportunities and informal social controls--are not fully addressed.

It must be emphasized that Gardiner's book may not serve as his final word on the E/S process as it relates to reducing crime in public housing, since the book did not address public housing per se. Gardiner has recently stated that he believes all of the following should be considered major components of a crime reduction program targeted on public housing:

- resident or tenant participation
- the physical environment in and around public housing projects
- police participation, both Housing Authority and municipal
- community services, programs and opportunities
- Public Housing Authority management and policies
- government policies and funding programs
- integrated and comprehensive program planning
- long-range community development planning and creation of opportunities for employment, education, social integration, and individual development

Thus, the E/S planning process may be useful in analyzing and addressing the crime problem in the area around public housing. While the E/S process incorporates many elements that are important to the development of effective crime reduction programs, including citizen involvement and coordination with local law enforcement agencies, the E/S planning process at its current state of development could

benefit from greater consideration of the social factors specific to the public housing environment in the analysis of the crime problem and development of crime reduction strategies.

Citizen Involvement

Gardiner's planning process collects data from citizens of the target area including offenders, victims, and users. In addition, Gardiner states clearly that citizens have a role in crime reduction efforts.

In spite of this, we find little in Gardiner's writings that calls for substantial involvement of citizens or residents of a target area in the planning or implementation processes. His approach suggests that in the early phases of implementation, feasibility tests should be attempted and "reactions and recommendations from interested organizations" be considered in the refinement to the "solutions" (Gardiner, 1978). Although citizens may have an important role in the implementation of community programs suggested by Gardiner's approach, the citizens' role in assessing the problem, in planning crime reduction efforts, and in implementing physical changes seems to be rather limited.

Shared Responsibilities

Since Gardiner's main work has been developing a planning process and participating as a team member, his writings may not reflect the extent to which he sees the need for sharing responsibilities and clearly defining the roles that the varying groups involved in the process should play. Gardiner has briefly described the roles that city agencies, law enforcement officers, urban planners, and neighborhood organizations should play in his planning process. Since none of his works has focused exclusively on the public housing environment, we find no discussion of the role that such key actors as residents, public housing management, and security officers should occupy in a comprehensive crime reduction program.

This discussion of Gardiner has sought to identify the applicability of his approach to crime reduction programs directed primarily to public housing. Gardiner's present approach has been more fully developed at the city-wide or neighborhood level and, therefore, he has not written at length regarding the specific problems of crime in public housing environments. This does not represent a deficiency in Gardiner's approach since it was specifically designed for the Law Enforcement Assistance Administration for use at the "neighborhood scale," rather than for public housing complexes. However, this analysis demonstrates that Gardiner's approach may be most useful as one component of a broader approach to the problem of crime in and around public housing.

Current Approaches: Brill

The three main operating principles upon which Brill's "comprehensive security planning" approach is based are:

1. In order to design a security program, one must understand the vulnerabilities of the physical site and the residents.
2. There exists the need for careful evaluation of security plans.
3. There exists the need for a mutually reinforcing mix of improvements. (Brill, 1977)

The first operating principal is reflected in Brill's extensive use of data, mapping techniques, and systematic research methods in analyzing a public housing complex's social and physical environment prior to recommending security-oriented strategies. The second operating principle is reflected in Brill's collection of baseline data that can be used in evaluating the security-oriented strategies. The third operating principle is reflected in the balance between physical and social strategies recommended by Brill in the various public housing complexes where he has developed "comprehensive security plans."

Data

The data collected by Brill contribute directly to the development of security strategies and have been published along with the "security plans." Through his studies of various public housing complexes, he has created an empirically oriented base of knowledge regarding the crime and fear of crime problems in and around public housing.

Brill's physically oriented "site security analysis" analyzes public housing residential complexes in terms of (1) hidden areas or places with few surveillance opportunities, (2) open or unassigned spaces on public housing grounds, (3) lack of access control onto grounds and into residential build-

ings, and (4) conflicting adjacent land uses or conflicting user groups. His site security analysis of the physical factors contributing to crime problems in public housing also includes mapping of crime sites as determined through resident interviews.

The second part of Brill's comprehensive security planning approach includes a Household Safety and Security Survey. The survey provides specific information on the victimization experiences of residents. Data are provided on numerous crimes, such as: personal and sexual assaults, robbery and purse-snatching, burglaries, vandalism, theft, and car damage. In addition, these surveys provide the information used in mapping the location of crimes. Questions regarding residents' fear of crime, the extent to which they alter their behavior patterns due to their concerns over crime, and their perception of the social problems contributing to crime are also included.

In addition to the immediate benefits that are received from mapping crime locations and obtaining the residents' perspective as they contribute to the security plan, there is one other potentially important use of the baseline type data that Brill collects in his approach. These data allow for rather detailed evaluation of the impact of a composite security plan not only on crime rates, but also on residents' levels of fear, altered behavior, perception of social problems, degree of social organization, social cohesion achieved, and satisfaction with their environment.

Thus, Brill has developed systematic research methods to investigate the problems of crime, fear of crime, and altered behavior in public housing environments. More than any other author reviewed, Brill builds inductively from his research findings to the development of security plans for public housing complexes.

Physical, Social, and Other Factors

As we have stated, Brill's research and security plans address many of the physical and social factors discussed above. Brill's physical design strategies also draw on the defensible space theories of Newman. For example, at Millvale (Cincinnati) and Nickerson Gardens (Los Angeles), Brill recommended strategies to improve surveillance and access control. He also suggested the creation of courtyards and other semi-public areas from what were previously public areas, and redesigning the circulation patterns through the complex. These strategies were employed by Brill in such a manner that "neighborhood-like" areas could be created. (Brill, 1976, 1977)

The socially oriented strategies recommended by Brill in various places include providing residents with mechanisms in which to organize themselves into tenant groups and councils, expanding and reorienting social services programs (including crisis intervention programs) and selected strategies to increase territorial attitudes on the part of individual residents.

Brill emphasizes social organization as the primary focus of his socially oriented strategy. Social services and management issues are also given considerable attention in developing security plans. Brill places less emphasis on such socially oriented strategies as providing employment opportunities for residents, providing supervision and organized activity for youths, and security personnel issues. The entire package of socially oriented strategies suggested by Brill in his "comprehensive security plans" has yet to be implemented fully.

Integrated Approach

Brill's "comprehensive security planning" approach is based on the operating principle which states that security can most successfully be enhanced with a mutually reinforcing mix of improvements. This approach rejects the idea that physical changes alone can be as effective in reducing crime

as a mixed strategy, since many of the problems that contribute to the vulnerability of residents to crime are socially oriented problems. Brill's "comprehensive security plans" include a reinforcing mix of strategies using both physically oriented strategies such as access control and dividing up of large areas into smaller semi-public areas ("clustering") and socially oriented strategies, such as the establishment of tenant councils to foster social organization and cohesion. Another example of how Brill's approach uses mutually reinforcing strategies is his suggestion that residents be trained and employed to help provide social services for other residents.

Citizen Involvement

It must be remembered that the integrated approach that Brill has presented in his writings has not been fully implemented. Therefore, it is difficult to assess the extent of Brill's reliance on citizen involvement. In his plans, Brill stresses the importance of citizen involvement in crime reduction strategies. He suggests several ways that citizens can contribute to security. For example, he says that citizen participation could be encouraged through the creation/expansion of resident councils, and resident/management security officer review boards. He also proposes that some residents be trained and then employed to provide social services for fellow residents. In addition, as we have pointed out, Brill includes residents in the problem assessment stage through his interviews.

Though Brill goes further than Newman or Gardiner in suggesting ways that residents can become involved in security, there are many activities which residents could undertake that Brill does not address. Specifically, Brill does not involve the residents in *developing the* planned changes. His position on citizen involvement is that residents should organize, form councils, and serve as advisors while participating directly in only part of the implementation effort. Until Brill's socially oriented strategies are fully implemented, only these very pre-

liminary statements can be made regarding the role of citizen involvement suggested by Brill.

Shared Responsibilities

Brill provides some information on ways to share responsibilities among the key participants of a security program. He calls for resident advisory boards, a resident/management security officer board, and suggests such roles for residents as providing additional social services for other residents. Brill addresses the issue of shared responsibilities, and in some cases defines roles for groups or individuals. Still, questions remain regarding the steps in the process that management, residents, local agencies, HUD, etc., should undertake to reorient and expand social services, reduce social problems, and increase the size and improve the operation of the security staff as Brill has recommended.

Current Approaches: Rosenthal

The integrated approach to crime prevention designed by Rosenthal is referred to as "turf reclamation." This group of primarily socially oriented strategies is applicable to public housing complexes as well as neighborhood environments.

The objective of the "turf reclamation" approach, as it relates to public housing complexes, is to achieve a state of security in the environment. Security is defined as "the state of being free of anxiety and fear for person or property, through a sense of psychological and physical well-being created by a network of visual and hidden systems" (Rosenthal, 1974).

"Turf reclamation" is based on the principles of community solidarity and social cohesion. The associated strategies are designed to stimulate social interaction at the public housing complex or neighborhood level and promote the values of the law abiding majority over and above the anti-social minority. In other words, these strategies attempt to pull together significant segments of the community--residents, PHA management, security patrols, local police, and others--to form an association of persons strong enough to "take control" over their environment and establish community standards. The two main strategies which have been used in demonstration efforts such as the one in selected public housing complexes in Pittsburgh include:

1. Creation of the position of Community Security Organizer. This individual carefully coordinates all security efforts by participating housing authorities.

2. Inclusion of residents as an integral factor in the determination of program goals and directions.

Community security organizers (CSOs) are usually public housing residents who are employed (though not in their own housing complex) to perform a variety of duties such as:

1. Aid in establishing building corridor patrols (non-uniformed security personnel)
2. Mobilize project youth into security task forces to protect the elderly and others
3. Develop resident awareness of security programs
4. Establish viable three-way communication among the residents, housing authority management, and local police precincts
5. Act on resident complaints regarding security or other matters dealing with either the local police or housing authority management.

Turf reclamation includes several other complementary strategies that make up the integrated approach. One of those approaches is a housing authority management policy, "social eviction," which is the eviction of tenants who are considered disturbing or dangerous to other tenants or to the general welfare of tenants. Though this eviction policy is controversial and potentially very difficult to implement, Rosenthal strongly suggests that it is an important component of the turf reclamation strategy.

In addition, the approach calls for intensive training of the residents selected to become CSOs. Rosenthal and Allen have developed such a training course at the Housing Management Institute of the Center for Social Policy and Community Development, Temple University. Training courses address such issues as how to determine specific crime-related problems

and the strategies that are available to help solve them. In addition, methods to facilitate community organizing and the identification of community resources that can aid in crime prevention are discussed.

Data

This section discusses Rosenthal's use of data and systematic research methods in particular public housing environments. Although little evidence of its application is available from the Pittsburgh demonstration itself, the approach is explained in the training manuals used by Rosenthal and Allen (1977).

Assessing Security Needs

At the outset of planning, Rosenthal suggests that management should make a preliminary estimate or rough appraisal of problems, constraints, goals, remedial measures, and further planning tasks. The preliminary appraisal should include problem analysis by management staff, policy input from administrative officials, and input from residents.

After preliminary planning is undertaken, fuller investigations should be made of the security problems, resources, and constraints. Rosenthal suggests that questions related to the housing complex's level of crime, the resident's fear of crime, and perception of which social and physical factors in the public housing complex are contributing to the crime problem are among the most important "research" questions in the problem assessment stage. In addition, it is considered important that information be gathered on the physical characteristics of the housing complex buildings, the location of past crimes, the extent of in-house security capabilities, the nature and quality of police services, and the willingness of local agencies to provide additional security and social services to public housing residents.

Rosenthal recommends that these questions be answered in large part through the use of group discussions primarily among residents, CSOs and public housing management and staff personnel. In addition, the turf reclamation approach uses resident surveys. The process for collecting and analyzing data used by Rosenthal is much less formal than the approach used by Brill. Therefore, less empirical or base-line data is collected and incorporated into the analysis process that leads to the selection of strategies to reduce crime in a particular public housing environment. Rosenthal's position is that needs analysis can be conducted in an adequate manner through relying primarily on residents and the use of informal research strategies. In addition, use of these data in developing crime reduction strategies is the responsibility of the CSO and the local Public Housing Authority management staff.

Physical, Social, and Other Factors

Although the "turf reclamation" approach is primarily a socially oriented group of strategies, Rosenthal draws selectively on Newman's "defensible space" theories and recommends that the residents and housing authority address the physical factors considered potential contributors to the crime problem. Surveillance and target hardening are the two primary physical factors addressed by the turf reclamation approach. Others such as access control, Rosenthal suggests, can, in large part, be handled through social changes. The approach does not address such physical factors as poorly designed circulation patterns, conflicting uses of public housing grounds, or lack of clearly defined areas.

We have already briefly discussed the emphasis that Rosenthal places on addressing the social factors described in the literature review as potential contributors to crime.

Each of the social factors is addressed in some manner by Rosenthal's approach. The basis of the turf reclamation strategy is the creation of a CSO position and staffing it with a person who is a trained, culturally sensitive, non-uniformed security person, community organizer, etc. Turf reclamation stresses the development of social organization, social cohesion, and informal social control through resident-directed activities. Youth activities are also important, as well as such management strategies as eviction, security issues, and management policies.

Integrated Approach

The emphasis on social services and the use of non-uniformed residents, together with the fact that little attention is paid to the physical factors suggested as potential contributors to crime make the turf reclamation approach very close to a pure social service approach to residential security. The turf reclamation approach places greater emphasis on the social factors than do any of the other approaches described. It is also true that it gives less attention to the physical factors than do any of the other approaches reviewed in this report.

In a paper prepared for the recent NAHRO/HUD Conference, the Pittsburgh Housing Authority, which implemented the turf reclamation program four years ago, referred to it as primarily a "social service" effort. The Authority has reduced the number of CSOs from 24 to 9 and currently plans to phase in security oriented aspects such as providing the CSO with additional training, uniforms, guns, arrest powers, etc. This change will reduce their current role as social service providers and change the program by turning it into a more traditional security program.

Citizen Involvement

Citizen involvement is the cornerstone of Rosenthal's approach. Rosenthal states that residents understand their problems and, therefore, should be the primary group analyzing their security needs. In Pittsburgh, residents not only analyzed their environment, they also made nominations regarding persons to fill the CSO positions that were developed. Central to the entire approach is the position that residents have the cultured sensitivity and capacity to be trained to take on security functions within the public housing environment. Rosenthal's approach has been demonstrated on a small scale using a few residents and he is in the process of training additional residents to take on the roles of the CSO. Writings on his approach do not suggest what would be the "optimal" level of CSOs or resident involvement in a given public housing environment. However, the basis of the turf reclamation approach is the recognition of residents as a potential crime prevention resource and the utilization of this resource in both the planning and implementation of this crime reduction method.

Shared Responsibilities

Rosenthal outlines in detail the role of the key actor in his approach--the CSO. In addition, he describes particular actions on the part of residents and the need for an "organized community." However, his approach does not explain in detail how the responsibility and roles in a security program are to be defined and shared by the key groups identified in the literature--PHA management, security officers, residents, HUD, and local agencies. His approach goes substantially further in this direction than others, especially

in his detailed analysis of the roles and functions of the CSO. For some of the other key groups, the roles have not been thoroughly defined.

*Current Approaches:
Westinghouse National Issues Center*

The Crime Prevention Through Environmental Design (CPTED) Demonstration Program directed by the Westinghouse National Issues Center was a four year (1974-1978) effort sponsored by LEAA. In essence, the program was to "test the usefulness" of Newman's defensible space concepts in settings other than public housing. The three environments selected for full demonstration programs were a commercial district in Portland, Oregon, schools in Broward County, Florida, and a residential setting in Minneapolis. The CPTED program sought to research, develop, implement, and evaluate a variety of crime reduction strategies in each of the three settings. One of the major goals of each program was to design strategies that suited the particular environmental setting. Thus, the early part of the project was concerned with literature review, site selection, formulation of strategies, and evaluation design. After sites were selected, a detailed analysis of crime and fear problems was undertaken in each of the sites. Implementation and evaluation took place during the final two years of the demonstration programs.

CPTED involved an integrated approach which combined access control, surveillance, activity support, and motivation reinforcement. These four broadly defined concepts yielded a wide variety of strategies to increase risk of offender apprehension, elicit positive attitudes and behavior on the part of the citizenry, and make maximum effective use of the existing environment (Westinghouse, 1978).

The primary goals of the program were (1) to provide a clearer answer to the question of "what strategy for what environment?" and (2) to develop a body of knowledge about

this and other questions on crime prevention that could be transferred to other cities.

Data

The CPTED approach made extensive use of data and mapping techniques to assess the opportunity for crime in demonstration site environments. As part of the CPTED strategy an environmental assessment package (OTREP) was developed to determine opportunity for crime. This assessment package is presented in *Crime Prevention Through Environmental Design Volume III* (Westinghouse, 1978). The opportunity for crime in any environment is identified as a function of four characteristics: "target," "risk," "effort," and "payoff." The first step in the OTREP analysis is to identify the context of the site, the types of buildings in the surrounding area, typical behavior settings, user characteristics, and potential offender populations.

The OTREP environmental assessment package includes a separate section for each of the four factors contributing to crime probability. Basically, the OTREP analysis compares a given environment to a control area. Before the analysis is performed, the observer must become familiar with both environments. The analysis is performed twice, once in the daytime and once in the evening. All observations of the target area are relative observations compared to the control setting. The first step in the analysis is to establish the context of the observation and the target site, including the surrounding types of buildings, behavioral settings, user characteristics, and identification of potential offender populations. Then, the four crime factors--"target," "risk," "effort," and "payoff," are examined relative to the control environment. Each analytical

section lists a range of items to be considered. For example, under "targets," the list includes money, private property, public property, wholesale/retail property, offices, and people.

"Risk" is associated with people and automobile activity in the target area, the actual physical environment of the site, the presence of law enforcement personnel, and the type, design, and access control of the buildings and residences in the surrounding area. The "effort" criterion is closely related to the maintenance of an area and the presence of target hardening devices, such as locks and barred doors. The "pay-off" element is primarily associated with the possibility of relocating or reducing the number of crime targets.

The OTREP analysis briefly addresses a fifth factor which, in some cases, does not lend itself to on-site observation. This includes media coverage of crime in the target area and environmental cues reflected by that setting, such as cleanliness, attractiveness, and landscaping.

Westinghouse applied this package on a test basis to school, residential, and commercial environments. The potential for carryover to other urban crime environments, including public housing, appears to be substantial.

The voluminous literature produced by Westinghouse on their demonstration program spends a considerable amount of time demonstrating *how* this model was applied to each of the three demonstration site settings.

Physical, Social, and Other Factors

The CPTED concept focuses on the interaction between the physical environment and human behavior. A discussion of the concept was presented in *Crime Prevention Through*

Environmental Design, Final Report (Westinghouse, August, 1978).

CPTED attempts to address each of the physical factors identified in this report. The Commercial District Demonstration Program in Portland relied primarily on physically oriented strategies including increased surveillance, access control, reduction of uncontrolled or unassigned space, elimination of conflicting uses of land, changes in poorly designed circulation patterns, and improved transportation services. Similarly, the School Demonstration Program in Broward County relied on physical design changes primarily with the goal of promoting surveillance and target hardening. In the Residential Demonstration Program, CPTED relied more heavily on socially oriented strategies.

Integrated Approach

The primary thrust of the CPTED program is the integration of several strategies. Examples include combining street lighting, a design strategy, with citizen oriented programs to promote surveillance (i.e., neighborhood watch groups), and other social and law enforcement strategies. Emphasis is placed on strategy sets. Even at the point of data analysis, CPTED seeks to develop crime prevention strategies by analyzing and manipulating combinations of physical, social, managerial, and law enforcement variables. The rationale for all CPTED strategies is, in fact, based on interaction between four operating concepts: access control, surveillance, activity support, and motivation reinforcement. The first two terms have been defined previously. Motivation reinforcement attempts to alter offender motivation and behavior by increasing the risk of apprehension and by reducing the potential payoff. Activity support attempts to identify strategies which reinforce

existing or new activities as a way of making effective use of the built environment. Taken as a whole, the CPTED literature presents an integrated approach to crime prevention in selected environments.

Citizen Involvement

CPTED identifies active citizen involvement as an essential factor in crime prevention. The approach suggests that diversity and meaningful involvement in all phases of crime prevention is critical, beginning with the planning phase and extending through implementation and evaluation. The Westinghouse experience with the CPTED project has led to recommendations concerning citizen involvement in crime prevention.

In the initial stages, it is recommended that project sponsors meet with civic, community, and private groups to identify salient crime and fear problems. In addition, a list of citizens representing different interests and viewpoints should be developed and communication among citizens, local organizations, and local government agencies pursued.

Shared Responsibilities

CPTED was specifically excluded from functioning in public housing and, therefore, does not address the issue of shared roles and responsibilities of participants involved in crime prevention in that environment. The difficulty in extracting information from the CPTED literature that may be relevant to the public housing environment is compounded by the fact that the approach does not clearly define roles for each of the participant groups in the environments in which it did operate. This absence may exist as a function of the approach itself, which discusses the merging of efforts to reduce crime. The vast amount of information generated in CPTED, if analyzed

carefully, might well result in at least partial answers to this perplexing problem of properly allocating shared responsibilities. On the other hand, it is quite possible that no absolute delineation of roles was possible or appropriate, given the environments in which CPTED was demonstrated.

Conclusion

We began our review of the literature searching for *the* book on crime and public housing. We attended the NAHRO Conference of public housing residents, management, and security staff in hopes of obtaining a clear picture of the factors that contributed to crime problems and gaining knowledge with regard to the current approaches that were effective in reducing crime. Then, AIR organized a conference of recognized experts, researchers, and government officials in the field of crime prevention. From that conference, we hoped to find answers to such questions as "What are the essential components of an effective crime reduction program?" and "What types of strategies are likely to be effective in various types of physical and social environments, and why?"

However, *the* book on crime and public housing has not been written. There is no clear picture in the literature of the major factors contributing to the problems of crime and fear of crime in and around public housing. In addition, there are no generally agreed upon answers to the question of what constitutes the essential components of an effective crime reduction program. One is only able to say that the particular components of a crime reduction program must address the recognized problems (social and physical) in a given public housing environment.

There is tremendous disagreement among residents of public housing, housing management staff, security staff, researchers, government officials, and nationally recognized experts on crime and crime prevention about the causes of and the solutions to the crime and fear of crime problems that have been raised in this report. There *is* agreement that there are multiple causes and, therefore, the need exists for a wide variety of crime reduction strategies and approaches to address them.

It is recognized that physical factors such as the lack of surveillance opportunities, access control, and target hardening all make criminal acts easier to carry out and reduce the risk of apprehension of the offender. It is also recognized that social factors such as the lack of employment opportunities, supervised activities for youth, and inadequate social services all contribute to the economic and psychological motivations that may lead some to commit crimes. In addition, social problems contribute to the vulnerability of the resident population to criminal offenders.

More importantly, it is recognized that the social and physical factors of a given environment work together to create one human environment in which crime occurs. In each environment (public housing complex), not only are the crime rates and types of crime committed different, the mix of social, physical, and other factors that contribute to the crime problem is also different. This point is essential to understanding how to develop appropriate crime reduction approaches.

The first stage of planning a crime reduction program is to analyze the extent to which individual social, physical, or other factors may be contributing to the problem. Residents, public housing security staff, management staff, and crime prevention experts are all key groups that can contribute to gaining an understanding of the crime problems. A second important stage of the planning process is to identify all of the available resources that can be brought to bear on programs designed to reduce crime. The selection of crime prevention strategies should flow from an analysis of both the problems and the available resources that can contribute to the crime reduction effort.

The state-of-the-art knowledge with regard to reducing crime in and around public housing is such that no strategy

or set of strategies has been tested and proven in its ability to reduce crime and the fear of crime in all public housing environments. Therefore, a critically important aspect of any crime reduction effort in public housing is the determination of the primary factors that contribute to crime, and the development of particular strategies and approaches to address each of these factors. For example, should it be determined that lack of adequate locks is the most serious physical factor and the lack of employment opportunities the most serious social problem faced by residents, a crime prevention program might employ and train residents to install the necessary locks.

There are few, if any, crime prevention strategies suggested in this report that can be used alone and expected to reduce crime significantly. Since social, physical, and other factors all join together to form the complex human environment, a comprehensive crime prevention approach must be composed of an integrated set of social and physical strategies that will reinforce each other in deterring potential offenders and reducing the vulnerability of potential victims.

In addition, the approach must utilize local resources to their full potential. For example, if youth lack supervised activities and there are adult residents of public housing who could be effective in working with children, the residents are a resource that should be employed to supervise the children and possibly reduce crime. Participants at both conferences generally agreed that residents are an essential group in any crime reduction effort. They should have the key role in the problem analysis, planning, and implementation stages. In addition, residents should have a major role in deciding which methods or approaches to undertake in the evaluation of crime prevention activities.

Another area rarely discussed in the literature, but prominent in the discussion among participants at both conferences

is the need to develop linkages between persons who live and work in public housing and those who do not. Linkages must be developed between the security staffs of PHAs and local law enforcement officials in order for these groups to establish a close and mutually supportive working relationship. In addition, resident groups in public housing should solicit the support and aid of other community, public, and private non-profit organizations. Public housing is often socially isolated from the rest of the city with its residents cut off from others. Overcoming social isolation has the potential of expanding the resources available to combat crime in and around public housing.

In conclusion, this report does not attempt to tell Public Housing Authorities or their residents exactly what to do to reduce crime. Adequate strategies to reduce crime are not precast; and, therefore, local strategies must be developed to address local problems. The HUD Anti-Crime Demonstration Program will have guidelines that allow local PHAs and their residents to determine the contents of their crime reduction programs as well as develop their own planning, implementation, and evaluation of the crime reduction strategies. It is the hope that after this Anti-Crime Demonstration Program has been fully implemented and evaluated, the next report on crime and public housing will show progress toward reducing crime and the fear of crime and toward answering many of the questions raised in this report and during the two conferences held in September and October 1978.

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