CRIME PLACES IN CRIME THEORY

by

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Abstract: *Criminologists and crime prevention practitioners are increasingly aware oj the importance oj places of crime. A place is a very small area, usually a street corner, address, building, or street segment. A focus on crime places contrasts with a focus on neighborhoods. Neighborhood theories usually highlight the development of offenders, while place level explanations emphasize crime events. Three perspectives suggest the importance of places for understanding crime: rational choice; routine activity theory; and crime pattern theory. Though these perspectives are mutually supportive, routine activity theory and crime pattern theory provide different explanations for crime occurring at different places. Five areas of research help us understand the importance of places: crime concentration about particular facilities (e.g.. bars): the high concentration of crime at some addresses and the absence of crime at others; the preventive effects of various place features; the mobility of offenders; and studies of how offenders select targets. Concern has been expressed that efforts to prevent crime at specific locations will only move it to other, unprotected locations. Recent research suggests that these fears may be exaggerated, and that under some circumstances the opposite effect occurs: instead of crime displacing, the benefits of the prevention efforts diffuse to unprotected locations. This paper concludes with a review of the 14 original articles in this volume.*

Following a rape at an Orlando motel, the victim sued the motel owners. She claimed that the crime was foreseeable and that the motel had not taken sufficient precautions to prevent such incidents. [1]

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A proposal to locate a checkcashing business in a neighborhood drew the ire of a San Francisco neighborhood association. The association, fearing increased street muggings, complained to zoning and other city agencies in an attempt to stop this establishment from opening (Bolton, 1993).

Police in Oakland, CA developed a drug enforcement program that focused on nuisance addresses rather than problem people. They call it beat health, because they believe that the problem locations are the source of drug and other nuisance problems in Oakland neighborhoods (Green. 1993).

A study found that about 15% of Milwaukee's taverns were responsible for over half of tavern crimes in that city (Sherman et al., 1992).

These examples provide only a glimpse of the growing recognition of the role of place in crime and crime control. Law suits that hinge on the ability of claimants to show that buildings and parking lots are unnecessarily dangerous abound in our civil courts (Bates and Dunnell, 1994). Local newspapers are full of community protests against drinking establishments, sex shops, or 24-hour stores that are seen as magnets for crimes and criminals. Community advocates suggest taking legal action against the owners of places that disrupt neighborhoods (Cadwalder et al., 1993). Police programs that focus on where crimes happen rather than the offenders who commit them are developing in cities and towns throughout the country, at the same time that a series of academic studies show that crime is concentrated at specific places even within neighborhoods that have high crime rates.

 Concern with the relationship between crime and place is not new. As early as the first half of the nineteenth century, French scholars analyzed the distribution of crime across regions with differing ecological and social characteristics (see Guerry, 1833; Quetelet, 1842). In the U.S., advocates of the pioneering "Chicago School" of sociology carefully examined the location of crime in the city of Chicago. They concluded that characteristics of the urban environment are critical to explaining the emergence of crime in specific communities (see Burgess, 1925; Thrasher, 1927; Shaw and McKay, 1942). However, these early attempts to understand the relationship between crime and place took a "macro" approach—looking at aggregates °f places such as regions, states, cities, communities and neighborhoods—rather than a "micro" approach that examines the places themselves.

 Recent interest in crime and place has focused on micro-level relationships. Such studies began with efforts to identify the relationship between

specific aspects of urban design (Jeffrey, 1971) or urban architecture (Newman, 1972) and crime, but broadened to take into account a much larger set of characteristics of physical space and criminal opportunity (e.g., Brantingham and Brantingham, 1975, 1977, 1981; Mayhew et al., 1976; Duffala, 1976; Rengert, 1980, 1981; Stoks, 1981; Le Beau, 1987; Hunter, 1988). These studies drew distinctions between the site in question and the larger geographical area (such as neighborhood, community, police beat, or city) that surrounds it.

Places in this micro context are specific locations within the larger social environment. They can be as small as the area immediately next to an automatic teller machine or as large as a block face, a strip shopping center, or an apartment building. Often places are thought of as addresses, specific types of businesses, or blockfaces.

This volume is dedicated to the micro-level examination of crime and place. Our concern is not with the larger social and ecological units that are often the focus of social programs and crime prevention efforts. Sherman et al. (1989) suggest that this new focus on small discrete areas is radical enough to be properly seen as a distinct new area of study in criminology. Though it is a departure from prior criminological work, as we will show next, the criminology of places fits neatly within several existing theories of crime.

In developing this anthology, we sought to bring together major new work about crime and the concept of place. The advent of high-speed, cheap computing, widespread use of computer-aided dispatch systems by the police, and inexpensive but powerful computer mapping has allowed criminologists to examine places in ways that were unavailable just a decade ago. Recent trends in our understanding of the role of opportunity in crime prevention (Clarke, 1993) and the impacts of crime displacement (see Gabor, 1990; Barr and Pease, 1990; Clarke, 1992; Eck, 1993; Clarke and Weisburd, 1994) suggest as well that place should be a central component in crime theory and crime prevention. This introduction begins by reviewing how these recent innovations in crime prevention theory contribute to crime place research and crime prevention efforts. It then turns to the empirical evidence that has been gathered about crime places and their implications for formulating crime prevention policies. In concluding, we discuss our choice of papers to include in this collection and

the specific contributions they make to our understanding of crime places and our efforts to control them.

CRIME PLACES AND CRIME THEORY

Theories of crime can be divided into those that seek to explain the development of criminal offenders, and those that seek to explain the development of criminal events. Theories of and research on offenders have been dominant in the development of criminology (Clarke, 1980). Most research on crime and crime prevention has been focused on why certain types of people commit crime and what we can do about them". It is only recently that serious attention has begun to be paid to explaining crimes rather than the criminality of people involved in crime. Concern with place is very much central to this approach.

While theories of crime and criminality are often seen as competing explanations of the crime problem, we think it useful to begin with the idea that offender and event explanations are complements to each other rather than competitors. Offenders may be highly motivated, but unless they create a crime event there is nothing to explain. Similarly, given a criminal act, the full etiology of the event must in some manner include an explanation of the offender. Offender theories should eventually tell us how people come to be criminal offenders, and the circumstances under which they desist from offending. Such theories may suggest crime prevention strategies that are focused on those individuals who are likely to become serious violent offenders, or high-rate offenders committing less serious crimes. However, to date theories about the development of criminality do not provide a solid basis for making such predictions, and there is little consensus as to what such a theory in the future would look like. Consequently, a preventive strategy based on offender theories is not near at hand. But even if we were to understand more about the development of criminality than we presently do, it is not clear whether all or even most offenders can be prevented from involvement in crime (see Clarke and Weisburd, 1990).

So even if we had a good explanation for the development of offenders, we would still need a good explanation for criminal events. Specifically, we would want a theory that could tell us why certain targets are selected by offenders—why some targets are attractive and others are repellent. What are the impediments to offending that are presented to offenders, and how are they overcome? What types of routine activities of offenders, victims and what have sometimes been termed guardians contribute to the likelihood of crime occurring in particular places? Though a comprehensive crime event theory that would provide unambiguous answers

to such questions is decades away, there is considerable consensus among criminologists who study crime events as to what such a theory should look like. Moreover, there is growing evidence that event-prevention strategies can have a dramatic and immediate impact on specific crime problems (see Clarke, 1992). Below we describe how crime and place come together in such theories and how they have been applied to crime prevention.

CRIME EVENT THEORY AND CRIME PLACES

Three recent theoretical perspectives—rational choice, routine activity theory and crime pattern theory—have influenced our understanding of the importance of place in crime prevention efforts. A rational choice perspective provides the basic rationale for defining place as important, since it suggests that offenders will select targets and define means to achieve their goals in a manner that can be explained (Cornish and Clarke, 1986). Some claim that this perspective is to some degree untestable, as it is almost always possible to interpret behavior as rational from the perspective of the offender (Parsons, 1951). Others have demonstrated that it is possible to test various forms of rational choice (see Hogarth and Reder, 1987). Nevertheless, a rational choice perspective can be used to develop testable propositions describing crime events and offender behavior. This is particularly true if a rational choice perspective is used in conjunction with routine activity theory (see Clarke and Felson, 1993).

Routine activity theory seeks to explain the occurrence of crime events as the confluence of several circumstances (Cohen and Felson, 1979; Felson, 1986, 1994; see also Felson in this volume). First, there must be a motivated offender. The explanation of the development of motivated offenders is the goal of offender theories. Second, there must be a desirable target. Third, the target and the offender must be at the same place at the same time. Finally, three other types of controllers—intimate handlers, guardians and place managers—must be absent or ineffective.

Intimate handlers are people who have direct personal influence over an offender (such as parents, teachers, coaches, friends or employers). In the presence of such people, potential offenders do not commit crimes. Most adults are away from intimate handlers for many hours of the day and many offenders, both juvenile and adult, have few or no intimate handlers (Felson, 1986).

People who can protect targets are guardians. They too must be missing from the place. Guardians include friends (as when three women decide to run together in a park in order to protect each other). as well as formal authorities such as private security guards and public police. People or

things that are separated from guardians for sustained periods have elevated risks of victimization.

People who take care of the places are place managers. Place managers, (such as janitors, apartment managers, and others) regulate behavior at the locations they control. Lifeguards, in addition to preventing drownings, also help assure that people who come to a pool behave themselves out of the water. For a crime to occur, such people must be absent, ineffective or negligent (Eck, 1994).

Crime pattern theory is particularly important in developing an understanding of crime and place because it combines rational choice and routine activity theory to help explain the distribution of crime across places. The distribution of offenders, targets, handlers, guardians, and managers over time and place will describe crime patterns. Changes in society have increased the number of potential targets while separating them from the people who can protect them (handlers, guardians, and managers). Reasonably rational offenders, while engaging in their routine activities, will note places without guardians and managers and where their handlers are unlikely to show up. Pattern theory explores the interactions of offenders with their physical and social environments that influence offenders' choices of targets.

According to crime pattern theory, how targets come to the attention of offenders influences the distribution of crime events over time, space, and among targets (Brantingham and Brantingham, 1993). This occurs because offenders engage in routine activities. Just like other, nonoffending individuals, offenders move among the spheres of home, school, work, shopping, and recreation. As they conduct their normal legitimate activities, they become aware of criminal opportunities. Thus, criminal opportunities that are not near the areas offenders routinely move through are unlikely to come to their attention. A given offender will be aware of only a subset of the possible targets available. Criminal opportunities found at places that come to the attention of offenders have an increased risk of becoming targets (Brantingham and Brantingham. 1993). While a few offenders may aggressively seek out uncharted areas, most will conduct their searches within the areas they become familiar with through non-criminal activities.

The concept of place is essential to crime pattern theory. Not only are places logically required (an offender must be in a place when an offense is committed), their characteristics influence the likelihood of a crime. Place characteristics highlighted by routine activity theory include the presence and effectiveness of managers and the presence of capable guardians. Crime pattern theory links places with desirable targets and

the context within which they are found by focusing on how places come to the attention of potential offenders.
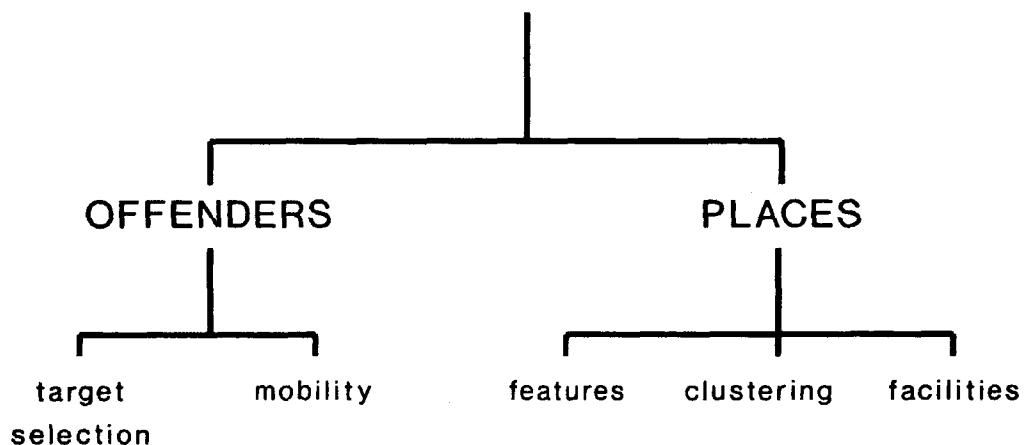
It is worth noting that although crime pattern theory and routine activity theory are mutually supportive in many respects, they can give rise to differing explanations of crime at specific locations. Given a set of high-crime locations, a crime pattern theorist would focus on how offenders discover and gain access to the place. A routine activity theorist would focus instead on the behaviors of the targets and the possible absence of controllers whose presence could have prevented the offenses from taking place—guardians, handlers, and place managers. In other words, for the crime pattern theorist, places are problematic because of their location and relationship to the environment. For the routine activity theorist, places are problematic because of the types of people present and absent from the location. Clearly, both explanations can be valid in different contexts and situations. It is possible that crime-specific explanations may show that for some events crime pattern theory is a particularly useful explanation, for other events routine activity theory offers greater insights, and for still a third group of events some combination of the two theories is needed.

CRIME PLACE RESEARCH

Recent perspectives in criminological theory provide a basis for constructing a theory of crime places. However, such a theory must be developed in reference to a growing literature about the relationship between crime and place. Below we summarize recent empirical evidence from five different types of research, each of which sheds light on the role of place in crime events (see Figure 1). Three of these use the place as a unit of analysis, making crime events problematic at the outset. In these studies researchers have tried to understand how the facilities associated with place influence crime, why crime clusters at places, and finally how the social and physical characteristics of places alter opportunities for crime. Two of the research categories focus on people but nonetheless lead to an understanding of the role of place in crime. In mobility and target studies, we gain insight into how offenders choose crime places and the social factors that inhibit their reach. All of the studies, except those examining target selection, use official crime and arrest records for data.

Offender interviews and observations form the basis of offender decisionmaking research.

Figure 1: Studies of Crime and Place

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     OFFENDERS                        PLACES
          |                               |
    ┌─────┴─────┐            ┌────────────┼────────────┐
  target      mobility     features   clustering    facilities
  selection
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Facilities and Crime

Facilities are special-purpose structures operated for specific functions. Examples of place facilities include high schools, taverns, convenience stores, churches, apartment buildings, and public housing projects. One way places matter is that different types of facilities increase or decrease crime in their immediate environment. As suggested by offender search theory, this could occur because it draws people, some of whom are offenders, to the area. Or, as routine activity theory suggests, this occurs because of the way the facility is managed, the desirability and

accessibility of targets found in the facility, the likelihood of handlers being at the location, and the level of guardianship found at the site. Evidence supporting either theory can be found in studies of crime around facilities (see, for example, Roncek, 1981). Unfortunately, these studies cannot compare the relative evidence supporting the two explanations because the studies do not differentiate between offenses at the facility and those in the surrounding block.

Another problem with some of these studies is that they often do not differentiate between crime density (crimes per land area) and victimization risk (crimes per target) (Wikstrom, 1993). Thirty years ago Boggs (1965) pointed out that most calculations of crime rates are not estimates of crime risk because inappropriate measures of the crime opportunities (targets) are used for the denominator in the calculations. Burglary rates are normally calculated by dividing the number of burglary events by the population of the area being studied. The appropriate denominator for calculating risk is the number of buildings in the area. Burglaries may be concentrated in one area relative to another because there are more places to break into in the first area, or because they differ in some other factor (e.g., the first neighborhood may be populated by childless couples in which both partners work, whereas the second area is populated by retired couples who spend a great deal of time around their homes).

Measures of opportunities have been used in some of these studies, but they are often indirect measures of the number of targets at risk. Engstad (1975), for example, used the number of bar seats as an indirect measure of the opportunity for assaults in and around bars. If bar seats are used to capacity, or if the vacancy rate for these spots is constant across bars, then they may be reasonable approximations of the number of targets at risk. If, however, some bars have a greater proportion of their seating empty than other bars, and vacancy rates are related to crime (e.g., bars with many crimes scare off potential customers), the opportunity measures may introduce a confounding influence to the estimated relationship being examined.

Roncek and his colleagues have conducted a series of facilities studies in Cleveland and San Diego, and they follow a standard methodology. The number of facilities of interest are counted in each of the city's census blocks using phone directories or other locally available rosters. The crime count by census block is derived from police data, and census files provide demographic information for control variables. These studies have found that bars and high schools are associated with elevated crime counts in the blocks in which they are located, but have little impact beyond the immediate block (Roncek, 1981; Roncek and Bell, 1981: Roncek and Faggiani, 1985; Roncek and Lobosco, 1983; Roncek and Meier, 1991;

Roncek and Pravatiner, 1989). The research has also found that public housing projects in Cleveland are associated with a small but significant increases in crime on their blocks (Roncek et al., 1981). Because compositional variables have been controlled for, the facility effects are assumed due to the place and not to the people who reside on the block.

A number of other studies report similar findings. Frisbie et. al. (1977) reported clustering of crimes within .15 of a mile around bars in Minneapolis. These counts were not standardized by controlling for the number of criminal opportunities available at different distances from the bars, so it is unclear whether this is due to an opportunity gradient around bars or whether bars enhance the criminal propensity of people who are attracted to bars.

Engstad (1975) compared the number of auto crimes and bar crimes (assault, disorderly conduct, and violations of the liquor act) in small areas with hotels to the same crime counts in adjacent areas without hotels. He standardized the crime counts by the number of residents living in the areas and found an association between the presence of hotels and higher rates of crime per thousand people. When Engstad (1975) compared hotel areas and standardized the crime counts by calculating opportunity-based rates for each crime (i.e., dividing auto crimes in each hotel area by the number of parking places in each area, and dividing the bar crimes in the area by the number of seats in bars), he found that one particular hotel area had higher auto and bar crime rates than the other hotel areas.

Engstad (1975) conducted the same types of analysis for shopping centers using auto crimes, thefts, and other property crimes and found that areas with shopping centers had higher rates of crime per thousand population than areas without shopping centers. When he compared the shopping center areas for these crimes standardized by opportunity-based measures (i.e., parking places for auto crime, retail space per 1,000 square feet for thefts, and acres of shopping center for mischief), Engstad (1975) again found variation among the shopping center areas. Because Engstad did not compare crime events in target areas to crime events in their surrounding areas controlling for opportunities, we cannot determine if the associations he found are due to different opportunities available or to the people who use the areas. Even when controls for opportunity were introduced, controls for other structural and compositional variables were not used. Consequently, we have no idea why such variation might exist.

Spelman (1992) examined the association between abandoned unsecured residential homes and crime on the blocks on which these homes were located. He found a positive association, though he did not control for the criminal opportunities on the blocks. He does provide evidence that the only significant difference between the blocks with abandoned homes

and those without such homes was that the former had more owner-oc-cupied buildings.

Brantingham and Brantingham (1982) studied the association between commercial burglaries per store on blocks and the presence of five types of "commercial landmarks": fast food restaurants, traditional restaurants, supermarkets, department stores, and pubs. Though supermarket and department store blocks had commercial burglary rates comparable to blocks without these landmarks, the other three landmarks had commercial burglary rates 2 to 2.5 times higher than the nonlandmark average (Brantingham and Brantingham, 1982).

Rengert and Wasilchick (1990) provide evidence from interviews with burglars that drug dealing locations might draw predatory offenders to an area to purchase drugs. These offenders then may commit predatory crimes in the area surrounding the drug places. Providing partial support for the view that places attract offenders for one purpose who then participate in other crimes, Weisburd et al. (1994) found an over-representation of crime calls for a series of crime categories in places that were identified primarily as drug markets.[2] These studies suggest three possible hypotheses: there is something about the place that fosters deviance in the block; the facilities draw people into the block; or both. Unfortunately, these studies cannot test these hypotheses separately.

Several studies suggest that the more access people have to an area or place, the more crime in the area or place. Friedman et al. (1989) examined the effects of casino gambling in Atlantic City on crime in the small towns along the main routes to this resort. They found that crime counts increased in these towns relative to towns not located on routes to Atlantic City, controlling for town population, unemployment, value of commercial and residential real estate per square mile, and population density. If we could assume that the small towns on the route did not change in social composition or structure at the same time casino gambling was introduced, the increase in crime would be most plausibly explained by the increases in outsiders passing through the towns. Unfortunately, the authors provide no evidence that the social composition and structure were not changed by the growth of Atlantic City.

Duffala (1976) and Nasar (1981) examined stores with varying crime counts (convenience store robberies and commercial burglaries, respectively) and found that those with the most crime were located on major thoroughfares. Comparisons of high- and low-crime neighborhoods (Greenberg and Rohe, 1984; White, 1990) and street segments (Frisbie et. al., 1977) show that area accessibility is associated with higher crime rates. The more people who pass a place, the greater the chances that the place will be the scene of a crime. This conclusion is consistent with the

hypothesis that places that attract large numbers of people will suffer more victimizations (these studies do not rule out the alternative hypothesis, however). This suggests that facilities attract people into the block, some of whom are motivated to commit crimes (Brantingham and Brantingham, 1981).

Though facilities may attract offenders onto a block, the variation in crime among blocks with the same facilities suggests that there may be important differences in the social structure of the places that account for differences in crime counts, even when controlling for crime opportunities (see Engstad, 1975). Further, all of the studies to date have been of facilities that may have low guardianship (because they attract large numbers of people with little in common) and/or low levels of place management (because of inadequate staffing or training). A study of the effects of facilities with high guardianship and place management (e.g., churches) on block crime would be revealing in this respect.

Clustering

Crime events are not uniformly distributed, a fact known for over a century. At every level of aggregation, some geographic areas have less crime than others (Brantingham and Brantingham, 1982). At the place level, clustering—repeat events at the same place— has been established by Pierce et al. (1986) for Boston and by Sherman et al. (1989; see also Weisburd et al., 1992) for Minneapolis. Such clustering has also been established for specific crimes (e.g., see Weisburd and Green, 1994 for drug offenses), and a number of successful crime prevention efforts have recently taken the approach of targeting small discrete areas defined as crime "hot spots" (e.g., see Sherman and Weisburd, 1995; Weisburd and Green, 1995: Koper, 1995).

Forrester et al. (1988) show how a successful crime prevention campaign can be built on knowledge of repeat breakins to the same residences. Repeat breakins to the same residences were also found in Saskatoon, Saskatchewan, Canada (Polvi et. al., 1990). Places with repeat offenses may have persistently low guardianship of attractive targets (as well as ineffective place managers). Offenders may select such places either as part of a determined search or as a chance encounter while engaged in non-criminal activities (Brantingham and Brantingham, 1981). If places and crimes are very similar, then solutions may be relatively easy to craft. Faced with a heterogeneous set of hot spots, effective solutions may be more difficult to find (Buerger, 1992; Sherman, 1992a).

We have no studies that have systematically examined the social structure and crime levels of a large sample of places to determine the link

between crime and the social structure of places. We only have ethnographic case studies of social relations at a single place (Liebow, 1967; Anderson, 1978; Anderson, 1990) or at a set of places in the same neighborhood (Suttles, 1968). Therefore, we have limited knowledge of whether the social structure of places influences the offender's decision to go there, or whether the social structure influences behavior once the offender is at the place. We can, however, gain additional understanding of these issues by examining the influence of site-level features on crime occurrence at places.

Site Features

Studies of crime clusters show offenses occurring at places but provide scant information as to why some places are more criminogenic than others. Are these places the hangouts of deviants? Is there a failure of social control at these places? Or are there features present at these locations that attract offenders from the surrounding areas? Some insight as to possible answers can be gained by examining studies of place features and crime.

The strategy of defensible space entails organizing the physical environment to enhance peoples' sense of territoriality, make it possible for them to observe their environment, and communicate to would-be offenders that they are being watched (Newman, 1972). Newman (1972) purported to find that public housing projects with defensible space features had less crime than projects that did not have these features.

Critics have attacked Newman's research and theory. Mawby (1977) suggested that Newman misrepresented his findings, purposely selecting the two principal study sites to bolster his premise and failing to describe the characteristics of the resident populations and offender rates of the two sites. Merry (1981) found that people do not automatically scrutinize their environment even when the physical arrangements make surveillance feasible, and that offenders know this. She criticized defensible space theory for neglecting the social dimensions of crime prevention. Mayhew (1981) concluded that consistent surveillance is unlikely except by employees of organizations who control places; a number of studies sponsored by the U.K. Home Office support this assertion (Poyner, 1988a; Poyner, 1988b; Webb and Laycock, 1992). Other reviews of research on defensible space consistently reported that the theory is vague and omits critical mediating variables (Mawby, 1977; Mayhew, 1979; Taylor et al., 1984).

Research on convenience stores also supports Mayhew's (1981) hypothesis that employees can prevent crimes through improved surveil-

lance. Reviews of studies comparing stores with few and many robberies point to such physical features as unobstructed windows, placement of the cash register so that the entrance can be monitored, and lighted parking areas fully visible from inside the store (Hunter and Jeffrey, 1992; LaVigne, 1991).

It is unclear whether the number of employees conducting surveillance makes a difference. Evaluating the impact of a Gainesville, FL city ordinance that required two clerks to be present in the evening, Clifton (1987) contends that robberies were reduced. This contention has been challenged by Wilson (1990) and by Sherman (1992b), both of whom claim that Clifton failed to rule out several important rival hypotheses. Nevertheless, Hunter and Jeffrey (1992) contend that this crime prevention measure had the strongest empirical support of all measures tested. LaVigne (1991), however, could find no such evidence in her study of Austin, TX convenience store crime.

Finally, from studies of the deterrent effects of guards, we find additional evidence that offenders avoid places with people trained to watch their environment and to intervene if criminal behavior is suspected. Hannan (1982) used multivariate crosssectional analysis to investigate the deterrent value of bank guards in Philadelphia. He found that the presence of guards was associated with fewer robberies, even when the volume of banking business and the demographics of the surrounding areas were held constant. Landes (1978) demonstrated that the decline in aircraft hijacking in the U.S. was due principally to the installation of metal detectors in airports and secondarily to increased use of armed air marshals on flights. Additional police security in New York City's subway system apparently reduced robberies there for a time, even when problems with police falsification of crime statistics were accounted for (Chaiken et al.. 1974, 1978). Book theft from libraries was deterred through the introduction of electronic security systems (Scherdin, 1992), while placing attendants in some parking facilities (Laycock and Austin, 1992) or installing closed circuit television (Poyner, 1988a) reduced auto thefts. In summary, offenders avoid targets with evidence of high guardianship.

But note that effective guardianship is linked to place management. In each of the studies just cited, the additional security was put in place by the owner or manager of the place, not by the users of the place.

Site features are not only useful for enhancing surveillance, they can also control access to places. Studies in the security literature highlight the effectiveness of physical barriers that prevent access to targets. Grandjean (1990) reported that Swiss banks with security screens have fewer robberies than those without such barriers. The installation of security screens in British post offices resulted in fewer robberies of these

places (Ekblom, 1987). The value of access control features for controlling crime depends on the crime. Eck (1994) found evidence that crack and powder cocaine dealers may prefer apartment buildings with physical features that control access. Thus the features that may prevent burglary may attract drug dealing.

A third way in which site features may influence offender decisions about places involves making the targets at the place less desirable or hard to attack. Protecting targets at places can be accomplished by such tactics as securing targets, removing targets from places, or making them appear to be less attractive. Property marking can sometimes reduce burglaries by reducing the value of the stolen goods (Laycock, 1985). Exact fares on buses were found to reduce robberies by securing the target to the floor of the bus (Chaiken, Lawless et al., 1974). Cash control methods {introducing timelock cash boxes, setting cash limits on draws at each teller, installing safes with adjustable time locks) have been reported to reduce robberies in betting shops (Clarke and McGrath, 1990). The removal of pre-payment gas meters from residences in a housing complex in Britain was partially responsible for reducing burglaries there (Forrester et. al., 1990).

Finally, how places are managed may have an effect on the risks of crime at a location. The ways in which bartenders and bouncers regulate drinking, for example, seems to have an effect on violence in drinking establishments (Homel and Clark, 1995). Offenders may select sites for criminal activity based on the level of control owners (or their hired surrogates) exercise over behavior at the location. Evidence for offender site selection based on place management can be gleaned from systematic comparison of crime and noncrime places. By examining the characteristics of drug dealing places and nondrug dealing places in the same area of San Diego, Eck (1994) found that crack and powder cocaine dealers seem to prefer small apartment buildings. Smaller apartment buildings appear to be owned by people who are not professional landlords and who do not have great financial assets. The majority of the apartment buildings that contain drug dealing are encumbered with debt, have lost value, and are either just breaking even or losing money for the owner. Thus, place management may be weaker at these locations; the landlords either do not know how to control the behavior of their residents or they cannot afford to do much about drug dealing. Drug dealers may select places with weak management, either because they are kept out of strong management places or they prefer weak management places, or both (see Eck in this volume).

In summary, there are a variety of physical and social features of places that enhance their attractiveness to offenders. These features include an

obvious lack of guardianship, easy access to the site, and the presence of readily attainable valuables. Sites without these features have been shown to have fewer crimes committed than similar sites with them. Additionally, evaluations of crime prevention programs demonstrate that removal of these attractive features reduces crime. Finally, how places are managed may influence the crime at sites. These studies demonstrate that offenders make choices about places based on site-level social and physical features.

Offender Mobility

The fact that criminals are mobile reinforces the importance of places for criminologists. Since offenders move about and crimes occur in a variety of settings, place and movement matter. Studies of offender mobility are based on official arrest and incident data from police and prosecutors' files. Reliance on crimes resulting in an arrest creates a potential source of bias in the results of these studies, given the low clearance rates of the crimes studied. Mobility studies may underestimate the distances offenders travel, if people who offend near their homes are more likely to be caught than people who commit their crimes further away.

Two aspects of mobility—distance and direction—have been examined in this literature. Distance and direction have been measured in a variety of ways, but for the most part they are calculated by connecting the address of a crime to the address of the offender's home. Distances traveled by offenders from homes to crime sites usually appear to be short, with the number of offenses declining rapidly as one moves further from the offender's home (Capone and Nichols, 1976; Phillips, 1980; Rhodes and Conley, 1981). At the same time, Brantingham and Brantingham (1981) hypothesize that offenders may avoid targets immediately adjacent to their homes to avoid being recognized.

Mobility may also be constrained between crime sites. Weisburd and Green (1994) argue that drug markets within close proximity to each other have clear and defined boundaries, often circumscribed by the nature of drug activities found in a specific place. Examining offenders who were arrested more than once for narcotics sales in Jersey City, they found it was very unlikely for an offender to be arrested in drug markets adjacent to each other. Indeed, suggesting a high degree of territoriality among offenders, it was more likely for a repeat arrestee to be arrested in a different district in the city than in a drug market a block or two away.

Evidence suggests that there may also be substantial variation by age, race, sex and crime type in offender mobility. Young offenders appear not

to travel as far from home as older offenders (Phillips, 1980; Nichols, 1980). African-American offenders may not travel as far to commit crimes as whites (Phillips, 1980; Nichols, 1980). Women may travel further than men to commit crimes (Phillips, 1980), but may not travel as far from home to engage in robberies (Nichols, 1980). Expressive crimes—e.g., rapes and assaults—are usually committed closer to home than instrumental crimes—burglary and robbery—(Phillips, 1980; Rhodes and Conley, 1981). For robberies, offenders attacking commercial targets seem to travel further than offenders attacking individuals (Capone and Nichols, 1976). Drug dealers may have the shortest travel distances of offenders studied, since a large proportion are arrested at their home address (Eck, 1992).

Offender mobility studies investigating direction consistently demonstrate that offenders move from residential areas with fewer targets to areas with more targets (Boggs, 1965; Phillips, 1980; Costanzo et al., 1986). If the residential areas of offenders are target-rich, then travel distances are shorter than when the offenders' residential areas are target-poor (Rhodes and Conley, 1981). Property offenders avoid targets close to home where they might be recognized (Suttles, 1968). Rand (1986) compared offense place addresses to offender and victim home addresses and found that the most common pattern was that of each address located in a different census tract. Further, as the distribution of targets in a metropolitan area changes over time, offenders' direction and travel distance follow the targets (Lenz, 1986).

Though the search area of offenders may be limited, it does not seem to be random. Offenders appear to search for targets, though age, race and possibly gender may affect search strategy. Carter and Hill (1976) suggest that black and white offenders have different cognitive maps (i.e., mental images of their environments), and these may influence target search patterns.

The preceding studies have often been interpreted as evidence of rational and deliberative target-searching behavior, and the influence of personal characteristics and the distribution of crime targets on this behavior. These studies, however, are consistent with two different target-search hypotheses: that offenders actively seek out attractive targets with low guardianship, and that they chance upon such opportunities while engaged in routine non-criminal activities. For example, Rhodes and Conley (1981) puzzle over an anomalous finding: that offenders seem to skip over areas of small businesses close to their home neighborhoods but prey on small businesses further away. Presumably, if offenders were aggressively seeking targets, then closer opportunities would be victimized more frequently than those further away. However, if offenders are finding

opportunities while going to and from work, school, stores, recreation facilities and other sites for common activities, and these places are located at some distance from offenders' places of residence, then this skip pattern may be more explicable.

Offenders' cognitive maps may not include much information about areas they pass through, but may be rich in detail about places where they go for legitimate purposes (Brantingham and Brantingham, 1981). An example of this can be found in a study of crime in Stockholm. Wikstrom (1995) describes how youths living outside the center city use public transportation to go to the center city for entertainment and shopping. The concentration of legitimate activities that are attractive to youths also creates an environment rich in targets. As a consequence, center-city Stockholm has more crimes per land area than other parts of the city (Wikstrom, 1995).

Offender Target Selection

Offenders themselves should be able to describe their decision- making processes, and a number of studies have examined crime site selection from their point of view. Most of these studies involve interviewing either a sample of subjects in custody or several offenders freely plying their craft. Most of the studies are of persistent adult offenders, so the conclusions one draws from them are unlikely to match the conclusions one would draw from a representative sample of offenders. Further compromising the conclusions we can draw from this approach is the fact that offenders do not always provide accurate accounts of their own decision making (Carroll and Weaver, 1986; Cromwell et al., 1991).

These studies consistently conclude that offenders are rational, even though their rationality is bounded (Rengert and Wasilchick, 1990; Feeney, 1986; Kube, 1988; Maguire, 1988; Biron and Ladouceur, 1991; Cromwell et al., 1991). Burglars report looking for cues that suggest a place is likely to yield acceptable gains with manageable risks, though among burglars there is variation in the salience of specific cues {Rengert and Wasilchick, 1990; Cromwell eL al., 1991). Planning is limited, and the more experienced the offender, the less planning that takes place (Feeney, 1986; Cromwell et al., 1991). Offenders find targets by chancing upon them during routine, non-criminal activities, and through intentional searches (Rengert and Wasilchick, 1990; Cromwell et al., 1991).

Thus, interviews of offenders confirm many of the studies that rely on official data: offenders make choices about places based on cues at the sites; and their discovery of places is in large part reliant on routine activities that are unrelated to crimes. This suggests that places with

disproportionately high predatory crime levels are likely to be easily accessible (i.e., on major thoroughfares), have things of value that can be taken, and emit cues that risks are low for committing crimes.

DISPLACEMENT OF CRIME AND DIFFUSION OF BENEFITS

As our review suggests, the basic principles of rational choice and routine activities apply fairly consistently across a series of crime place studies. Nonetheless, the application of these principals to crime prevention has often been hindered by the threat of spatial displacement (see Reppetto, 1976). If it is the case that crime events can easily shift from one place to another, then the collective benefits of crime prevention at places as we have defined them become doubtful. While Sherman and Weisburd (1995) argue that it is theoretically important to show that crime can be discouraged at hot spots irrespective of the phenomenon of displacement, it is surely difficult to encourage crime prevention efforts if such displacement is complete.

One difficulty in defining the extent of displacement in place studies is that displacement is often a secondary issue for investigators. It only becomes important once the primary impacts of a treatment have been established, and it seldom receives the kind of methodological concern or focus that is accorded to the intended effects of treatment (see Weisburd and Green chapter in this volume.) Moreover, there are a myriad of forms that displacement can take. Thus, a finding of little displacement in regard to the movement of offenders to areas near a crime place after the introduction of crime prevention initiatives does not mean that such displacement has not occurred in other areas of a city, or indeed in regard to other types of offending behavior. If displacement is spread broadly enough, it could easily become indistinguishable from normal changes in crime patterns (Pease, 1993).

Several authors have argued that the presumed threat of displacement resulting from focused crime prevention efforts develops from the "dispositional" bias of traditional criminological theory (Barr and Pease, 1990; Clarke and Weisburd, 1994; Eck, 1993; Barnes, in this volume). According to this argument, the use of rational choice and routine activities as a basis for the prediction of displacement effects would result in a low rate of displacement. These authors contend that "the volume of crime is dependent as much on the numbers of suitable targets and capable guardians as of likely offenders. Thus, if targets decline and guardianship

increases, reductions in crime would be expected to follow without any threat of displacement" (Clarke and Weisburd, 1994:167).

There is a growing body of evidence that suggests that displacement is seldom total and often inconsequential or absent (Gabor, 1990; Barr and Pease, 1990; Clarke, 1992; Eck, 1993; Hesseling, 1995). Though it is impossible to completely reject displacement, the absence of consistent findings of large displacement effects implies that traditional dispositional theories may be invalid. Proponents of dispositional theories can justifiably claim that most studies did not look for displacement, and when they did their methods may have been to weak to find it (Eck, 1993). Nevertheless, the preponderance of evidence—both weak and strong—presents difficulties for many standard theories of criminality.

A number of recent studies suggest that scholars and crime prevention experts may have to take into account a phenomenon that is the complete opposite of displacement in assessing place-based crime prevention efforts. In this sense, not only is the threat of displacement likely to be less than ordinarily assumed, but the crime prevention benefits of interventions may be greater than anticipated. Whether termed a "multiplier effect" (Chaiken et al., 1974), a "halo" effect (Scherdin, 1992), a "free rider" effect (Miethe, 1991), or a "free bonus" effect, there is growing evidence that crime prevention efforts may actually diffuse their benefits beyond the targets that were initially the focus of intervention. Clarke and Weisburd (1994) coin the term "diffusion of benefits" for this phenomenon, which they describe in part as the "spread of the beneficial influences of intervention beyond the places which are directly targeted" (p. 169). While spatial diffusion effects have only recently become a concern in place-based studies, initial evidence points to the salience of this concept for crime prevention programs that focus on place. For example. Green (1995) finds improvement not only in the "nuisance" addresses that were targeted by the Oakland Beat Health Unit, but also in the surrounding housing units. This improvement was found both in observations of the physical characteristics of the property and in measures of official contacts with police (see Green, in this volume). Weisburd and Green (1995) also find evidence of diffusion in the Jersey City Drug Market Analysis Experiment. In this case, calls for service for drug-related offenses in the experimental areas decline in relation to control locations, not only in the hot spots targeted but also in the two-block buffer zones surrounding them.

STAKING OUT NEW GROUND

Crime places are beginning to emerge as a central concern among both criminologists and laypeople. While the larger worlds of community and

neighborhood have been the primary focus of crime prevention theory and research in the past, there is a growing recognition of the importance of shifting that focus to the small worlds in which the attributes of place and its routine activities combine to develop crime events. In this volume we seek to advance knowledge about crime places in terms of theory, empirical study, practical application and research method. The contributions that are included provide insight not only into how crime and place interact, but also as to how such knowledge may be translated into concrete crime prevention efforts.

The first section provides four papers that focus on theoretical problems. In the first, Lawrence W. Sherman presents a broad outline of how the study of crime at places can be developed and how it might influence public policy. He begins by noting that such study demands a reorientation relative to the units of analysis used in research and theory. From the individuals and communities that have preoccupied criminological study we must move to more defined and discrete units of place. But in taking such an approach, Sherman suggests that we should not abandon the insights of traditional criminological approaches. Drawing from the notion of criminal careers, he illustrates the salience of concepts such as onset, specialization and desistance for understanding the development of crime at places.

Marcus Felson examines the motivation to intervene and prevent crimes of people at places. He focuses on the responsibility felt by three crime controllers: capable guardians (Cohen and Felson, 1979); intimate handlers (Felson, 1986); and effective managers (Eck, 1994). The effectiveness of each of these discouragers of crime is very much dependent on the extent of responsibility they feel to the place that is the potential target of crime. When people have direct and personal responsibility for a place (for example, through ownership or assigned employment responsibility) they are much more likely to invest efforts to prevent crime than when they have little personal or professional interest. Unfortunately, modern society has chosen to emphasize the latter forms of responsibility at the expense of the former.

Drawing from the broad theoretical perspectives that inform study of crime at place, John E. Eck develops a general model of the geography of illicit retail marketplaces. He begins with the essential dilemma of participants in any illicit retail market: how to make contact with a buyer or seller and still protect oneself from the police and other offenders. He shows that there are two distinct marketing strategies for reconciling this dilemma. In the first, sellers and buyers use social networks to screen potential partners and to identify new ones. In the second, the routine activities of the area and place are used to identify illicit market areas and

places that provide both security and access in the context of everyday social activities. Eck contrasts the operating strategies of two San Diego drug markets and provides evidence suggesting the plausibility of his model. He argues that the study of illicit retail marketplaces will be much enriched if crime place researchers subject his model to repeated testing in diverse illicit retail markets.

Because of the centrality of the threat of displacement to criticism of place-based crime prevention, we include Geoffrey C. Barnes' fresh approach to displacement in our discussion of theoretical problems. Barnes begins by bringing into context the sometimes polemical tone of debates on crime displacement, suggesting the need to focus more carefully on how we define both displacement and the types of evidence used to establish or refute its presence. But Barnes goes beyond the traditional debate by suggesting that displacement, whatever its extent, may in itself be a potent tool in crime prevention. He suggests that we can optimize displacement in crime prevention by better identifying its form and timing. Even if displacement is inevitable in certain circumstances, crime prevention experts can channel it in directions that are likely to lead over time to an overall reduction in the frequency and seriousness of crime.

We shift from theory to empirical study by providing three examples of research on how place and crime interact. William Spelman begins by examining the "criminal careers" of public places. Are some places more crime-prone than others? Are some places particularly crime resistant compared to others? Is "crime proneness" or crime resistance stable over time? Spelman provides answers to these questions in the context of an analysis of calls for service at high schools, housing projects, subway stations and parks in Boston. His analyses provide a substantial caution to those that have simply examined the cross-sectional concentration of crime at places. Examining the distribution of crime events over time, Spelman concludes that a substantial proportion of the statistical concentration of crime at places is due to random and often temporary fluctuations in crime events. Nonetheless, even after correcting for such fluctuations, Spelman finds that the worst 10% of locations account for some 30% of crime calls.

Taking the case of a specific type of location—liquor establishments—and crime, Richard L. and Carolyn R. Block provide a careful analysis of crime and place in Chicago. Using computer mapping as a means of identifying liquor crime hot spots, they find surprisingly little relationship between the density of liquor establishments and liquor-related crime. Their work suggests the importance of going beyond the type of facility found at a place to the routine activities that surround it. Liquor is sold at private clubs and restaurants, as well as nightclubs and dance halls.

It is available in neighborhood bars and carry-out stores. Each of these types of locations suggests a different context of routine activities of potential offenders, victims and guardians, leading to different rates of crime.

Nadera S. Kevorkian also finds strong support for taking into account the specific characteristics of places in understanding crime. In focusing on fear of crime among the elderly in the Armenian Quarter of Jerusalem, she provides an important crosscultural example of the importance of understanding the crime/place connection. Comparing experiences and attitudes of the elderly who live within the enclosed areas of the Armenian quarter with those who live in less controlled social space, Kevorkian finds significantly lower levels of fear and victimization. The importance of place in crime is as important in this relatively low-crime area of Jerusalem as it is in high-crime urban centers in the U.S.

In Section III, we shift focus from understanding the relationship between crime and place to how knowledge of places can be applied to crime prevention and control. Lorraine Green's article on drug abatement in Oakland, CA provides evidence that crime prevention programs that take a specific and place-based approach can have a significant impact on crime. In her evaluation of project Beat Health, Green finds that official measures of narcotics activity declined significantly as a result of the intervention. As important, she shows that there was substantial improvement in the physical characteristics of Beat Health sites. This finding suggests that places can be substantially rehabilitated by putting pressure on place managers. Green's paper is notable also because she uses the movement patterns of offenders to show that diffusion of benefits and displacement may not be mutually exclusive.

D. Kim Rossmo provides a guide for using crime place theory and research in practical crime investigation. He focuses upon the problem of serial violent criminals to illustrate the ways in which offender search theory can be used in combination with computer mapping capabilities to identify the probable home locations of violent offenders. Of particular interest is that Rossmo begins with the spatial pattern of the crime sites of a single offender and uses this information to locate a small area in which the offender is likely to live or work. His use of offender search theory and computerized mapping demonstrates the utility of environmental criminology for very practical purposes. His work provides a solid example of the potential ways in which crime place theory and method drawn from the best of academic criminology can be brought to the grassroots level of crime prevention activities.

In the final section of our volume, we include five papers on place research methods. Our choice here was not accidental. We believe that

important advances in our understanding of crime places and improvement in crime prevention efforts cannot be attained without careful attention to the methods used to define and assess the relationship between crime and place. Too little attention has been given to place methods. We sought at the outset to offset this omission in crime place studies.

The section begins with two papers that address the complex issue of translating concepts about place to its reality. Drawing from their experiences in defining high-crime places in the Minneapolis Hot Spots Patrol Experiment (Sherman and Weisburd, 1995), Michael E. Buerger, Ellen G. Cohn and Anthony J. Petrosino illustrate the many problems that researchers and practitioners are likely to face in trying to clearly define the boundaries of crime places. What criteria should be used? What should be done when different data about place seem to provide contradictory images about its definition? What are the limits of present technologies for defining crime places, and how do these limits impact upon practitioner/researcher cooperation?

Also drawing on data from the Minneapolis Hot Spots Experiment, David Weisburd and Lorraine Green illustrate the difficulties of measuring displacement in place studies. Pointing to problems of overlap of "displacement areas" and the wash-out effect of trying to track crime changes in high-crime neighborhoods, they suggest that hot-spot studies may often be biased toward a finding of no displacement effects. They conclude that real progress in the study of spatial displacement and the related phenomenon of diffusion cannot be made until such phenomena are made central rather than secondary issues of study.

Dennis P. Rosenbaum and Paul J. Lavrakas also point to the weaknesses of present data in fully conceptualizing the nature of place and its importance in the crime equation. They suggest that survey methods can provide an important tool for expanding present knowledge and improving evaluation efforts. But traditional survey techniques are not well-adapted to small-scale concepts of place, and traditional concerns about sampling error have inhibited the use of surveys for very small geographic units. Rosenbaum and Lavrakas argue that new methods can be developed that are consistent with surveying places, and that problems of sampling error at places must be balanced against the amount of "nonsampling" error in crime place studies.

The final two chapters examine the role of information technologies and computer mapping in advancing research and crime prevention efforts in crime places. Maps play a critical role in understanding crime places and in developing policies to prevent crime at places. J. Thomas McEwen and Faye S. Taxman review the ways in which computer mapping

of crime places has been applied by police agencies as a crime analysis and prevention tool. Their paper illustrates the potential for improving crime prevention efforts through basic research on places, as well as the developing sophistication of criminal justice agencies in their approach to crime places.

Michael D. Maltz brings the discussion full circle. We began this chapter by distinguishing between theories of crime events and theories of criminality. Maltz shows how new methods of organizing data can link the development of criminals to the places with which they came into contact. He brings together a concern with understanding the broad social and environmental components of crime at place with the developing potential of computer mapping and information technologies. Maltz notes that criminologists and crime prevention experts can now look across broad arrays of data in ways that were virtually impossible just a few years ago. Maltz calls for the integration of data that would provide a more qualitative and developed view of places and crime, one that would allow researchers and practitioners to identify the full social, economic, physical and criminal characteristics of crime places. We believe this understanding is crucial if we are to fully integrate the study of place into crime prevention efforts.

These 15 path-breaking papers demonstrate the variety of contributions that an understanding of places can make to criminology and crime prevention. While these papers provide new insights into crime patterns, they intentionally raise many questions that we cannot yet answer. Continuing the many lines of research suggested should produce useful results far into the future.

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NOTES

1. This summary is based on a lawsuit brought before the Florida courts in which the Crime Control Research Corporation was asked to serve as an expert on behalf of the defendant.

2. Eck's model of illicit retail market places, in this volume, suggests an alternative explanation: that the association between crime and drug places is less causal than spurious. The deteriorated economic conditions of an area, combined with the presence of numerous targets arrayed along arterial streets, give rise to both, but for different reasons. In other words, the same conditions (though not the processes) that give rise to many forms of crime give rise to retail drug places.

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