The Criminology of Place: Street Segments and Our Understanding of the Crime Problem

David Weisburd

Elizabeth R. Groff

and

Sue-Ming Yang

In Press
Oxford University Press
Chapter 8:

Conclusions

When scholars and practitioners have thought about the crime problem, they have generally begun with a fundamental assumption that has focused their interests and their investigations. That assumption is simply that crime is a product of human agency, and because of that, the key unit of the study of crime and its control must be people. Criminologists accordingly have focused on the factors that cause individuals to become involved in crime, or that lead them to desist from criminal behavior. Similarly, crime prevention practitioners have looked to develop crime prevention policies that would rehabilitate and change offenders, or that would deter them from future criminal behavior. What is common to these approaches is the focus on people as the key unit of analysis for understanding and doing something about the crime problem.

In this book we have taken a very different approach to the crime problem. We recognize at the outset the importance of human agency. Crimes are committed by people, and individuals are an integral part of the crime equation. But the human agency that is involved in choosing to commit crimes is carried out in the context of particular environments. Our approach has been to see how our understanding of the crime problem can be enhanced by focusing our interests on where crime occurs. We have not ignored people in this context. The people who live, work and visit places are an important part of our efforts to understand crime at place, as we have seen in prior chapters. Rather, we began our investigation by putting places at the center of the crime equation, and then asking how people and other characteristics of places influence the likelihood of crime. A key finding of our study is that crime is “tightly coupled” to place. In this context, crime should not be seen as a serendipitous occurrence at place, a random event that can move
with ease across places in the city. Rather, our work emphasizes that there are characteristics of places that strongly link crime to small areas of geography like street segments.

Our emphasis on putting places at the center of the crime equation represents a new way of thinking about the crime problem. In this concluding chapter we want to focus on how this approach has added to our knowledge about crime and crime prevention. Does the criminology of place offer new insights into our understanding of crime? Does it provide new opportunities for doing something about the crime problem? We begin by reviewing the major findings of our study and their implications for our understanding of crime and crime prevention. We focus on five specific contributions that we noted in our introductory chapter:

1) Crime is tightly concentrated at crime hot spots, suggesting that we can identify and deal with a large proportion of crime problems by focusing on a very small number of places.

2) These crime hot spots evidence very strong stability over time, and thus present a particularly promising focus for crime prevention efforts.

3) Crime at places evidences strong variability at micro levels of geography, suggesting that an exclusive focus on higher geographic units, like communities or neighborhoods, will lead to a loss of important information about crime and the inefficient focus of crime prevention resources.

4) It is not only crime that varies across very small units of geography, but it is also the social and contextual characteristics of places. The criminology of place in this context identifies and emphasizes the importance of micro units of geography as social systems relevant to the crime problem.

5) Crime at place is very predictable, and therefore it is possible to not only understand why crime is concentrated at place, but also to develop effective crime prevention strategies to
ameliorate the crime problem at place.

After summarizing the main research findings of our study, we consider the broad policy implications of our work. We argue that crime prevention policy, and not just theoretical criminology, must begin to focus interest on crime at place. The criminology of place provides new and important insights into how society should deal with the crime problem. Finally, before concluding, we discuss specific limitations of our study, and how future research can improve our understanding of the criminology of place. In concluding, we argue that places should form a central concern of criminologists, policy makers and practitioners in the 21st century.

The Law of Concentrations of Crime at Place

A key requirement for a science of the criminology of place and the adoption of place-based crime prevention is that crime is heavily concentrated in what have been termed “crime hot spots” (Sherman et al., 1989; Sherman and Weisburd, 1995; Weisburd and Green, 1995). The tight coupling of crime and place would predict a consistency and stability in the concentration of crime at place, reflecting the fact that there are specific processes that bring crime to concentrate at specific places.

In contrast, if crime were only weakly coupled to place, we would not expect strong crime concentrations in the city. Crime in this context would be distributed randomly across places in the city, as there would be little binding crime to specific places. If crime is concentrated in crime hot spots, then it is natural to ask what accounts for that concentration. What leads crime to be coupled to specific places? In turn, a concentration of crime at place suggests that there may be an opportunity to more efficiently allocate crime prevention resources by focusing them at specific places, rather than spreading them widely across places in the city.
As we have noted in our introductory chapter, a number of studies beginning in the late 1980s suggest that significant clustering of crime at place exists at micro levels of geography, regardless of the specific unit of analysis defined (see Brantingham and Brantingham, 1999; Crow and Bull, 1975; Pierce et al., 1988; Roncek, 2000; Sherman et al., 1989; Weisburd and Green, 1994; Weisburd et al., 1992, Weisburd et al., 2004; Weisburd, Morris and Groff, 2009). Sherman, Gartin and Buerger’s (1989) seminal analysis of emergency calls to street addresses over a single year in Minneapolis, Minnesota found that only 3 ½% of the addresses in the city produced 50% of all crime calls to the police. They regarded these results as so startling that they called for a new area of study, which they termed the “criminology of place.”

Other studies produced similar evidence of the concentration of crime in crime hot spots. Weisburd and Mazerolle (2000), for example, found that approximately 20% of all disorder crimes and 14% of crimes against persons were concentrated in just 56 drug crime hot spots in Jersey City, New Jersey, an area that comprised only 4.4% of street segments and intersections in the city. Similarly, Eck, Gersh, and Taylor (2000) found that the most active 10% of places (in terms of crime) in the Bronx and Baltimore accounted for approximately 32% of a combination of robberies, assaults, burglaries, grand larcenies and auto thefts.

Our study includes the longest time series of data ever used to examine the concentration of crime at place. Our findings confirm earlier studies, and document once again the tremendous concentration of crime at micro levels of geography in a city. Using 16 years of data for street segments, we find that about 50% of crime is found at just 5 to 6% of street segments. More than 20% of crime incidents in Seattle were found at just 1% of the street segments.

But our data go beyond prior studies by not only identifying strong concentrations of crime at micro levels of geography, but also in identifying a stability of crime at place over a
long time series (see also Weisburd et al., 2004). For each of the 16 years we observe crime at street segments in Seattle, we find a very similar level of concentration. This stability of crime concentrations across time was well illustrated in Figure 3.2. It is in some sense startling that over 16 years, about the same number of street segments produce about the same proportion of crime, especially when we consider that there were important changes in the level of crime in Seattle during this period. Despite a more than 20% decline of crime at street segments, the number of street segments that account for 50% of crime each year remains very stable.

In Chapter 3 we raised the question of whether this stability could be termed a “law of crime concentrations.” Our finding, as we noted there, is particularly interesting in light of Emile Durkheim’s classic proposition that the level of crime is stable in society, or rather that there was a “normal level” of crime in society. For Durkheim, this meant that crime was not necessarily an indication of an illness or pathology in society, but rather that healthy societies would inevitably have some normal level of crime. Crime waves and crime drops in this context can be seen as the result of some “abnormality” in society that results from crisis or dramatic social change.

Underlying Durkheim’s proposition is his understanding of crime as a product of social definition. Kai Erikson (1966) was to build upon this idea in his classic study *Wayward Puritans*, where he sought to show that the definition of crime has a social function. By defining others as deviant, society can help draw the boundaries between acceptable and unacceptable conduct (see also Adler and Adler, 2009; Becker, 1963). Defining people as criminal in this sense serves a function in defining the moral boundaries of society. We can know the boundaries of acceptable behavior by observing “deviants” who are sanctioned for violating societal norms.
Crime rates over the last few decades would seem to strongly contradict Durkheim’s conception of normal levels of crime in society. Between 1973 and 1990 violent crime doubled (Reiss and Roth, 1993), and in the 1990s the U.S. experienced a well-documented “crime drop” (Blumstein and Wallman, 2000). In the 1970s, Alfred Blumstein and colleagues (Blumstein and Cohen, 1973; Blumstein and Moitra, 1979; Blumstein, Cohen and Nagin, 1977) hypothesized that Durkheim’s proposition could be applied to punishment in America, where imprisonment rates had remained static for a long period of time (see also Tremblay, 1986). But recent dramatic increases in U.S. incarcerations in the 1980s and 1990s would seem inconsistent with the normal crime, or “normal punishment” (Blumstein and Cohen, 1973) hypothesis, unless of course we were to postulate that these are periods of dramatic social change.

While Durkheim’s proposition regarding a normal level of crime in society does not seem to fit recent experience and is seldom discussed by criminologists today, our data suggest that there is indeed a “normal level of crime” in cities, but one that relates to the concentration of crime at place and not to the overall rate of crime. We think in this context that a different proposition from Durkheim’s can be raised at this juncture, and should be examined in future studies. There appears to be a “law of concentrations” of crime at place. Despite changes in crime rates, the concentration of crime follows a consistent pattern across time in Seattle. This is an intriguing finding that places Durkheim’s theorizing in a new light.

At the outset it is important to note that there are as well strong similarities in levels of concentrations observed across cities. Sherman et al. (1989) found that 3 to 4% of addresses produced 50% of emergency calls to the police in Minneapolis. Pierce et al. (1988) found an almost identical distribution of crime calls at addresses in Boston. Our data in Seattle find only a slightly lower level of concentration, which could easily be explained by the differences in unit
of analysis (addresses versus street segments) or the nature of the data used. Our study, for example, excluded a number of street segments that were officially part of the street grid, but did not fulfill our requirements as possible behavior settings. Using a similar unit of analysis, Weisburd and Amram (In Progress) found that 5% of the street segments in Tel Aviv were responsible for 50% of the crime incidents, a statistic remarkably similar to the results in Seattle.

Can we use Durkheim’s initial insights to consider possible reasons for this law of concentrations of crime at place? If we follow Durkheim and other theorists that built on his work, we would look to the role of crime at place in defining normative boundaries in society. In this case, we might argue that a certain number of places in the city with severe crime problems serve as lessons for the city more generally. This would fit well with our finding, discussed in Chapter 4, that crime hot spots are found throughout the city. Accordingly, we all have direct visceral experiences with the “bad places” in the city, and perhaps that serves to define for the rest of us the “moral boundaries” of place. The normal level of crime concentrations in this context would relate to the proportion of problem places that are needed to bring the lessons of moral boundaries to the city’s residents.

Another possible explanation for a law of concentrations comes from our identification in Chapters 5 and 6 of the concentration of other characteristics of places in the city. For example, we noted in Chapter 5 that the concentration of bus stops or number of public facilities stayed relatively constant across time as did the concentration of crime. Perhaps the law of concentrations of crime is related to the overall distribution of social and environmental characteristics of places in cities. Does the stability of patterns of business and employment in a city, for example, reflect more general patterns of concentration that are related to the growth and development of urban areas? Certainly cities regulate such concentrations, by defining
commercial, business and industrial use of property. Perhaps the normal concentrations of crime are simply a reflection of the normal concentrations of other social activities in the city. Our data suggest that there are hot spots of crime opportunities and social disorganization, and that those characteristics evidence relative stability in concentrations at place (see Chapters 5 and 6). The law of concentrations of crime at place may simply be a reflection of a more general law of the stability of concentrations of specific aspects of social and economic life in the city. Indeed, this is consistent with Juran’s (1951) identification of the Pareto Principle, which he argued could be applied widely across social and physical phenomena.

But this brings us back to Durkheim, because crime is a social phenomenon and its tolerance is a social construct. Is society willing to tolerate crime at only a certain proportion of the landscape of a city? Is the law of concentrations a result of the boundaries of crime at place that citizens are willing to tolerate? Will people become worried and call for action when crime hot spots increase beyond a specific proportion of places in the city, and will they become more lax when the concentrations are below that level?

We think that these are intriguing questions and that our work has uncovered an important social law that needs to be examined in more detail in other studies, drawing upon other sources of data about the organization of city life. But irrespective of our search for a broader understanding of the law of concentrations of crime, our data provide strong reinforcement for the idea that crime is not randomly spread across the city but is concentrated at specific places often termed crime hot spots. This concentration of crime at place is consistent with an assumption of the tight coupling of crime at place. It also suggests that there may be strong opportunities for crime prevention by focusing resources at the places where crime is concentrated.
Stability and Variability of Crime at Place

Concentration itself does not necessarily provide a solid empirical basis for either refocusing crime prevention resources or calling for significant theorizing about why crime is concentrated at place. The law of concentrations shows that crime concentrations are similar across place over time. It does not confirm that crime patterns at specific places are consistent over time. For example, it could be that 5 or 6% of street segments in Seattle include 50% of crime each year, but that those streets change year to year. If that was the case, then the underlying assumption that crime is tightly coupled to place would be brought into question. It would also be true that the opportunities for creating more efficient crime prevention by focusing on hot spots would be challenged. A crime prevention policy focused on hot places would simply be chasing crime around the city.

Our data do not support a model of shifting high crime places. Indeed, our work has strongly reinforced the idea of strong bonds between crime and place. In Chapter 3 we examined the developmental trends of crime at street segments in Seattle over a 16 year period. We identified a group of different patterns. One clear pattern of chronic or hot spot crime places emerged, including about 1% of Seattle street segments. This pattern began our observation period as the most serious hot spots in Seattle, and remained hot spots throughout the time period observed. Though just 1% of the city landscape, they accounted for more than 20% of crime in the study period. The relative intensity of crime at these places, and the stability over time of this developmental pattern in our data suggests that there are specific characteristics of these places that generate or attract crime. In studies of individual behavior these are often termed “risk factors” for crime (Farrington, 1997; Green et al., 2008; Hawkins et al., 1998; Nagin, 1999; Nagin and Tremblay, 2001), a concept we return to later in the chapter.
The persistence of these high crime places, and the fact that they include so much crime, reinforces our earlier observation regarding the opportunities of place-based prevention. These data suggest not only that a large proportion of the crime problem can be addressed at a relatively small number of places, but also that without intervention those places would continue to be hot spots of crime. They represent a set of stable targets for crime prevention that will provide substantial crime prevention benefit if programs or policies succeed.

Reflecting a similar underlying structure of tight coupling between crime and place are the more than 80% of the street segments in the city which had very little or no crime throughout the study period. Here, there would seem to be factors that help places resist or discourage crime. Again, drawing from studies of individual criminality, we might term these “protective factors” (see Brennan et al., 1997; Farrington and West, 1993; Wikström and Loeber, 2000). The tight coupling of crime at place would not only predict that some places have characteristics that create risks of crime, but also that other places may have characteristics that act as protective factors against crime.

We also observe markedly increasing and decreasing crime trends, though this was true for a relatively fewer numbers of street segments. About 12% of the street segments in Seattle evidenced strongly decreasing trends during the study period. Interestingly, as we described in Chapter 3, these street segments had a crime decline almost equivalent to the overall crime drop in Seattle during this period. This led us to suggest that traditional approaches that speak about crime patterns across large geographic areas were likely to miss important variation within the city. For example, in our study the vast majority of street segments changed little during a period when Seattle overall experienced a more than 20% decline in crime at street segments.
The crime decline was concentrated in Seattle at a relatively small number of places as we expect it was in most other cities.

Importantly, during the crime decline some street segments in Seattle experienced crime waves. Almost 5% of street segments had sharply increasing developmental trends during a period of large crime declines across the city. Indeed, these street segments evidenced an average increase in crime of about 95% during this period. Clearly, by focusing on citywide or large area trends, we will miss important variation within the city. Only a small proportion of Seattle street segments experienced a crime decline in the 16 years we studied, and a not insignificant group of street segments (about 1,124) experienced “crime waves” during this period. This suggests the importance of the criminology of place for thinking about the crime problem more generally.

The Importance of Studying Crime at Micro Units of Geography

Our analyses of the geography of developmental patterns of crime at street segments provided important insights into our understanding of the processes that generate crime. Perhaps the key objection to our work would be that we have unnecessarily rarified our geographic analysis, and that our choice of a micro place unit for studying crime provides no benefit over the study of higher order geographic processes. Are crime hot spots at a micro geographic level just proxies for larger hot spot communities? Is study of place in the micro context, as we have defined it, really necessary for understanding crime in urban areas? Or is it simply cutting up the pie in additional pieces without adding new information about the crime problem? These questions are key to our understanding of the criminology of place. We have argued that crime
is tightly coupled to micro units of geography. In Chapter 4 we subjected this proposition to direct empirical analysis.

Our study provides unambiguous answers to these questions. We do not find evidence suggesting that the processes explaining crime patterns at street segments come primarily from higher geographic influences such as communities. There are indications of the influence of higher order trends in our data, for example in the fact that higher crime street segments are not distributed at random, and are more likely to be closer to each other than would be predicted simply by chance. But these indications of macro geographic influences are much outweighed in our data by evidence of the importance of looking at crime at the micro level (i.e. street segments in our study). There is strong street to street variability in crime patterns in our data, and such variability emphasizes the importance of studying crime at place at a micro unit of analysis.

We do find cases in our data where several adjacent street segments, one after another, evidence similar developmental trends of crime. Nonetheless, the evidence of heterogeneity of street segments, even in areas where specific patterns are more common (for example the southeastern sections of Seattle), points to the critical importance of understanding how characteristics of places at the street segment level influence crime, as do our observations that crime hot spots are spread throughout the city landscape. More general evidence of spatial heterogeneity found in statistical analyses of the geography of street segments in our study further reinforces this.

Indeed, when we looked at spatial attraction and repulsion of different developmental patterns, we did not find a single example of significant spatial repulsion at any of the distances we examined. This is a particular intriguing finding, because it suggests that even when the spatial patterns are radically different from street to street, they are not consistently governed by
forces pushing them away from each other. If crime patterns at place were simply the result of higher order forces, then we might expect just such an outcome. Area trends would be determinate of local trends, and accordingly there would be spatial repulsion of specific trends, for example hot spots in “good neighborhoods” and cool spots in “bad neighborhoods.” Our findings do not support such a model of crime patterns in the city in which the presence of, for example, chronic hot street segments means that crime free street segments are not to be found in the same area. Though there are area wide trends, for example residential areas with larger numbers of crime free or low crime pattern street segments, higher crime patterns are often interspersed in these areas as well.

An intriguing question raised by the variability of crime across street segments relates to potential impacts of displacement of crime (see Reppetto, 1976; Weisburd et al., 2006). One possible explanation for the tremendous street by street variability that we observe is that crime is constantly shifting from place to place. While it is impossible in our data to fully understand the role of displacement in understanding crime problems at micro geographic levels, the stability of crime at place we discussed earlier certainly suggests that displacement is not a major cause of the street by street variability in crime that we observe. Indeed, while we observe a good deal of street by street variability in crime patterns, there is as we described in Chapter 3 tremendous stability of crime at the street segment level. Such stability is inconsistent with the displacement hypothesis. Moreover, as we will argue later when we focus directly on policy recommendations of our work, recent studies show that displacement is not an inevitable outcome of crime prevention at hot spots, and indeed is an unlikely occurrence (Braga, 2005; Guerette and Bowers, 2009; Weisburd et al., 2006). We suspect that displacement is not a critical feature for understanding street by street variability in crime.
At the same time, there are certainly forces pushing down on the street segments that we study. These may come from communities and the specific social and economic changes that they experience. It may also come from higher levels of geography, for example, national social or economic processes. But our data illustrate clearly that much is lost if we simply examine crime trends at the geographic levels that have traditionally interested criminologists. Much of the action of crime comes from very small geographic units such as street segments. We think our findings suggest that it is time to move the geographic cone of criminological interests and crime prevention to the criminology of place.

**Hot Spots of Opportunity and Social Disorganization**

If crime is tightly coupled to place, then we should be able to identify the specific characteristics of places that lead to specific crime patterns of crime at place. For example, we should be able to identify the risk factors that lead to higher crime at place, or the protective factors that seem to insulate places from crime. But for such characteristics to have salience for our understanding of the criminology of place, they must vary at the same geographic level as crime. For example, if a specific characteristic that leads to higher risk of crime is found across a community, it may help us to understand why there are more crime hot spots in that area overall, but it would not help us to understand why there is variability within that community. Such variability has been the main focus of the criminology of place.

Do characteristics that have been assumed to influence crime at place vary at a micro level of geography? Are there hot spots of characteristics that increase risks of crime, or hot spots of characteristics that would be expected to discourage crime at place? Are such characteristics, like crime, tightly coupled to place? These questions have not been raised
systematically in earlier studies, but are key to advancing our knowledge of why crime is concentrated and stable at micro levels of geography.

*Opportunity Theories and the Criminology of Place*

The importance of opportunity theories for understanding crime at small units of geography is well established (Brantingham and Brantingham, 1981, 1984; Clarke, 1983, 1992, 1995; Cohen and Felson, 1979; Cornish and Clarke, 1986). Indeed, the major theorists in this area have seen crime opportunities as the key variables in understanding the concentrations of specific crimes at specific places (Brantingham and Brantingham, 1981, 1984; Clarke, 1983, 1992, 1995; Cohen and Felson, 1979; Cornish and Clarke, 1986; Eck and Weisburd, 1995; Weisburd et al., 2004). This reliance on opportunity theories is easy to understand when we consider that these scholars have generally focused on crimes rather than criminals. A focus on crime naturally leads scholars to specific places or situations, and the opportunities that situations and places provide for crime. We expected at the outset that measures reflecting opportunity perspectives would vary at the street segment level. However, we wanted to examine whether this assumption would be strongly supported by empirical data.

We examined four main dimensions of opportunity theory: 1) motivated offenders; 2) suitable targets; 3) guardianship; and 4) accessibility/urban form. Opportunity measures are, as we expected, concentrated and evidence strong variability across places. For example, 50% of high risk juveniles (a proxy in our work for “motivated offenders”) are consistently found on between 3 and 4% of the total number of Seattle street segments. In turn, half of all the employees (a proxy for “suitable targets”) in the city were located on less than 1% of Seattle street segments. In routine activity theory, both of these characteristics would be expected to
increase the risk of crime at place (Brantingham and Brantingham, 1995; Weisburd, Groff and Morris, 2009). In Chapter 5 we showed that there are hot spots of motivated offenders, suitable targets and capable guardians. This was not surprising given prior theorizing, but our data are among the first to illustrate this fact.

We also find that opportunity characteristics of places evidence much spatial heterogeneity. As with crime, we observed a great deal of street by street variability in the nature of crime opportunities. In statistical terms, there is a significant amount of negative spatial autocorrelation evident in the variables we examined. In this sense while there are hot spots of crime opportunities, such hot spots are not clustered only in specific neighborhoods. Our results suggest that characteristics reflecting opportunity theories are indeed associated with specific street segments, and are not simply reflecting larger area trends. At the same time, for many of the traits identified here we also saw concentrations in larger areas, suggesting as we had seen with the distribution of crime at street segments that larger area effects are also at play in influencing larger concentrations of certain opportunity characteristics in specific areas of the city.

One intriguing finding in Chapter 5 is that many of the opportunity characteristics of place we examined stayed relatively stable over the periods for which we had data available. Of course, as we noted in Chapter 5, we could not measure some elements of opportunity theory directly, and perhaps if we could have we would have observed more variability in opportunity characteristics of place over time. However, the stability of opportunity characteristics of places over time is not surprising. We would not expect land usage to change day to day or even year to year. Residential blocks are likely to remain so, as are commercial streets. While businesses may hire or fire employees or go out of business, dramatic changes are likely to take long periods
of time. Facilities that may increase suitable targets, such as libraries, parks, or community centers are even less likely to change over time because of the cost to the community to alter infrastructure. Even when facilities are added or closed, there is little change in the overall pattern of the facilities. The impact of any changes is highly localized to the streets nearby (Groff, 2011). These are all components of opportunity theories and suggest a natural stability in characteristics of opportunity at place.

It certainly seems reasonable to postulate that such stability in characteristics of place is a key reason why crime at place is relatively stable over time. If opportunities for crime are indeed related to developmental crime patterns at places (as was illustrated in Chapter 7), then if those characteristics evidence relative stability over time we would expect relative stability in crime patterns as well.

Social Disorganization and the Criminology of Place

We noted in Chapter 6 that social disorganization theories have been used primarily to understand the concentration of crime at higher levels of geography. They have been linked strongly to concepts of neighborhoods and communities (Bursik and Grasmick, 1993; Sampson and Groves, 1989; Sampson et al., 1997; Shaw and McKay, 1942 [1969]), and have rarely been used to understand micro geographic processes (for exceptions see Rice and Smith, 2002; Taylor, 1996). For criminologists who have placed emphasis on social disorganization theory, social processes occur in relatively larger areas where social and economic forces influence the ability of communities to regulate and enforce norms on their members.

We believe that neglect of social disorganization theory in the criminology of place has hindered the development of theory and empirical analysis, and that the inclusion of social disorganization perspectives in our work is one of the most important contributions of our study.
The founders of the social disorganization perspective sought to bring into our understanding of crime the important social dynamics that occur within communities in urban areas. They were concerned with the face to face interaction of community members, and the ways in which communities differed in their abilities to control misbehavior. Social disorganization theory places emphasis on the social processes that occur in social systems, emphasizing that the ecological nature of community is key to understanding the crime problem.

Routine activity theory (Cohen and Felson, 1979), situational crime prevention theory (Clarke, 1980, 1983), and crime pattern theory (Brantingham and Brantingham, 1993a) are the key sources for the opportunity perspectives we have described in this book. While their focus on the context and situation of criminal events naturally makes these important perspectives in the criminology of place, they have often ignored the fact that places have a social context that may reflect not situational opportunities but underlying social processes that impact upon crime. Such social processes have been seen as the province of more traditional theorizing, and sometimes have been neglected because they seem unlikely to be influenced by crime prevention. Opportunity theorists do not doubt the importance of social forces such as poverty or illiteracy in crime, but they believe that these, like the influence of the weather on crime, do not provide direct solutions to crime problems (Birkbeck and LaFree, 1993; Clarke, 1995). It is interesting in this regard that theorists associated with the social disorganization perspective have taken the opposite view, suggesting that opportunity-based crime prevention may work in the short run, but social interventions broadly focused will be needed to have long term effects on crime (Sampson et al., 1997).

We think that the idea of behavior settings, which we have used in defining the street segment as a key unit of analysis in the criminology of place, is consistent in many ways with the
concept of community as presented in the social disorganization perspective (Barker, 1968; Wicker, 1987; Taylor 1997, 1998). It also offers, as we discuss in more detail when we focus on policy implications of our work, an opportunity for directing social interventions at a scale that is within reach of crime prevention practitioners in cities. Behavior settings are micro communities, or “small scale social systems” (Wicker, 1987: 614), evidencing many of the characteristics that defined neighborhoods and communities for the Chicago School or later theorists in this area.

For example, we noted in Chapter 1 that people who frequent a street segment get to know one another and become familiar with each other’s routines. Residents develop certain roles they play in the life of the street segment. There is the person who is always there to help neighbors, the busybody, the organizer, and even the person that seems to disregard everyone else by having a noisy dog, or teenage children who play loud music late Saturday night. On many streets there is at least one neighbor who will accept packages for other residents when they are not at home. Norms about acceptable behavior develop and are generally shared. Shared norms develop from interactions with other residents and observations of behaviors that take place on the block without being challenged. Street segments are likely to have standing patterns of behavior that are temporally specific. The mail carrier delivers at a certain time of day, the corner resident is always home by 5pm, another neighbor always mows his lawn on Saturday.

Our point is that the street segment is a type of community, which may not include all elements that are traditionally attached to this concept, but certainly is likely to include many. It is at the very least a first building block of community, and in that context street segments are likely to function as a key unit for informal social control at a micro-ecological level. We think
that street segments provide a unit of analysis which ‘fits’ with both ecological theories and opportunity theories, which led us to explore whether characteristics of social disorganization varied at a micro level of geography.

Our findings regarding the distribution of characteristics of social disorganization across places are striking. There is tremendous concentration and variation in most of the measures that we examined. Looking both at structural and mediating variables of social disorganization, we found that there are hot spots of social disorganization at the street segment level. For example, social disorder is one of the most direct indicators of the inability of a social system to control behavior. Our data indicated that 50% of reports of physical disorder in Seattle were found on between 1.5 and 3% of street segments. Fully 50% of truant students (a mediating variable used as a proxy for “unsupervised teens”) were consistently found to live on between 2 and 3.5% of the total street segments during the study period. And these hot spots were not simply part of contiguous hot spots at larger geographic levels. They are not found only in specific neighborhoods; rather they are distributed across the city landscape.

We found strong evidence of spatial heterogeneity of social disorganization at street segments. While there are sometimes clusters of street segments with specific traits in what may be termed communities or neighborhoods, there is also significant street by street variation in such concentrations. This is an extremely important finding, since it suggests that a perspective that has generally been seen as relevant at higher levels of geography shows concentration and variability at the street segment level. The fact that there are hot spots of social disorganization at this level raises the intriguing question of whether such hot spots are related to hot spots of crime (see later). But irrespective of that relationship, our work is the first to establish that social
disorganization variables are concentrated at micro levels of geography and vary significantly at that level.

**Hot Spots of Crime Are Predictable**

Having established that crime is tightly coupled to place at a very micro level of geography, it was natural to turn to the factors that appeared to bind crime to street segments. In Chapters 5 and 6 we showed that characteristics of social disorganization and opportunity were concentrated at places and that they evidenced strong geographic heterogeneity. In Chapter 7 we turned to the relationship between these possible explanatory paradigms and variability in developmental patterns of crime at place. Are hot spots of social disorganization and crime opportunities related at street segments? Can we explain different developmental crime patterns with variables representing these key theoretical dimensions of place?

Our findings from a multinomial regression analysis were unambiguous. We observed a very high degree of statistical fit between theories of opportunity and social disorganization and crime at street segments. Using a Pseudo $R^2$ measure suggested by Nagelkerke, we gain a value of explanation in our model of .68. To put this in context, in Chapter 7 we compared this result to a study conducted by Weisburd and Piquero (2008) that assessed model fit in tests of criminological theory more generally. They found that the median value for $R^2$ in studies they reviewed was only .36, and a quarter of the studies examined had values of less than .20. The average $R^2$ value for person-based studies in that study was about .30.

The very high model fit statistics we observed reinforce the conclusion that crime is bound tightly to place by specific characteristics of places. We find that much of the variation in developmental patterns of crime at place can be explained, and indeed that the level of
explanation is considerably higher than that found in more traditional studies of criminality and crime. Crime at place in this sense is systematically related to the specific characteristics of opportunity and social disorganization that we have focused upon in our study. While the criminology of place is a relatively new area of study in criminology, we already know in this sense a good deal about the factors that create greater risk for crime and those that discourage crime.

Of course, our ability to explain variation also suggests that we have strong tools to ameliorate crime problems at places. We will focus on this more directly in the next section, but at this juncture we think it important to note that crime at place is very predictable. Such predictability is consistent with our position that crime is tightly coupled to place by specific characteristics that vary at a micro level of geography.

Given the reliance of crime and place scholars on opportunity theories for understanding the causal mechanisms that underlie crime at place, and the general neglect of social disorganization perspectives in this area, we also sought to compare the strength of each perspective in predicting crime patterns at places. One conclusion is clear from our analyses: variables representing both theoretical perspectives have significant influences on developmental crime patterns of street segments. In an overall model test, nearly all of our measures of opportunity and social disorganization are found to significantly influence developmental patterns of crime at place. Our findings that opportunity measures have salience for understanding variation in crime patterns at places are important, but not surprising given the key role of opportunity theories in early research in the criminology of place. The fact that measures of socio-economic status, physical disorder, unsupervised juveniles, and collective efficacy also have significant impacts on developmental crime patterns at street segments stakes out new
territory, suggesting that it is time to bring the social disorganization perspective to the criminology of place.

But what if we want to compare directly the specific explanatory power of each perspective? Are opportunity perspectives as represented in our study more salient for understanding the criminology of place than social disorganization perspectives? We used a direct method for making this comparison that examined how well each theory independently fit the variation in developmental crime patterns we observed. Using this approach, both perspectives provided a strong fit to developmental patterns of crime at place. The opportunity perspective provided a value of explained variance (Pseudo $R^2$) of .66 versus .51 for the social disorganization measures. This suggests that a model exclusively concerned with opportunities for crime (as we measure them) is likely to provide a higher level of prediction of developmental patterns of crime at place. However, the differences were not as large as we might have expected given the theoretical predominance of opportunity perspectives in this area.

We think that our data support an “integrated theoretical approach” (Bernard and Snipes, 1996) to the criminology of place. Both opportunity measures and social disorganization measures provide important information for understanding variation in developmental patterns of crime at place. An exclusive theoretical approach focusing on either one or the other theory strikes us as inconsistent with the empirical data we examined. It is time to include both opportunity and social disorganization in our understanding of the criminology of place (see Rice and Smith, 2002, Smith et al., 2000, Maimon and Browning, 2010 for examples of systematic theory integration at the micro level).

We recognize in taking this approach that social disorganization theory has been assumed to influence crime only at much higher geographic levels. It is traditionally thought of as a
theory of communities and neighborhoods. But social disorganization, as we have argued throughout this work, is as meaningful a concept at the street segment level as it is at the larger community level. This is something that most people who live in a city will recognize. The immediate social context of city life is the people on one’s block. These are the people that one sees each day, and those who have most immediacy when we are concerned with problems or seek help.

The Chinese folk saying that we quoted in Chapter 1 that “(n)eighbors next door are more important than relatives far away,” strikes us as particularly salient for understanding our data. Neighbors close by play a key part in modern urban life, and they are the key context in which our daily lives are located. In some ways it seems quite natural that social disorganization perspectives should be salient on street segments as well as in larger communities. The sense of belonging to a community of residents does not necessarily follow the boundaries of a politically defined community. Our first encounter with social life each day is likely to come when we walk out on our street. It is its look and feel that provides a visceral sense of the order of our immediate world. We suspect in this context that community social controls begin with the social order of our streets. The larger community is built up one by one from those streets, but it does not take away from the fact that the idea of community is relevant at the street segment level. What our study illustrates is that there is tremendous variation from street to street in such elements of community life, and these variations are strongly related to developmental patterns of crime at place.

What Differentiates Crime Hot Spots from Crime Free Street Segments

While we presented an overall analysis of developmental crime patterns, we focused particular attention on comparing hot spot street segments (i.e. the chronic crime pattern) with
street segments that were found to be generally crime free in our study. This comparison provided the greatest contrasts in our data, and allowed us to focus in directly on why some places become hot spots of crime while others seem to discourage crime events.

The two most important predictors of crime hot spots are drawn from the opportunity perspective. Both relate to the suitability of places as crime targets. The larger the residential population of a street segment, the more likely it is to be a crime hot spot. Similarly, when there are more employees on a street segment, it is much more likely to become a hot spot of crime. These findings reinforce a more general conclusion of the opportunity perspective. The factors that increase the risks of crime relate directly to the situational opportunities that places present. When more people live on a block, there is more potential for crime because there are more potential victims (and perhaps higher numbers of motivated offenders as well). When more employees work on the block, they increase the amount of crime on that street, because as we discussed in Chapter 7 they are likely to increase the volume of targets on the street.

Another indicator of crime opportunities, arterial roads, also increases the risks of crime on street segments markedly in our data. Arterial roads are much more likely to become crime hot spots. Again, the component of situational opportunities is reflected strongly in our data. Arterial roads are more likely to bring together motivated offenders and suitable targets, because they are easily accessible. They again increase the volume of routine activities at places.

But opportunity measures are not the only key variables in our analysis. Three variables that reflect the social disorganization perspective also have very large impacts on the likelihood of a street segment being a crime hot spot. The higher the level of physical disorder on a street segment the greater the likelihood of it being a high crime street segment. This is very much consistent with the idea that an inability of the small social systems to control disorderly
behavior will increase the risk of crime. High socio-economic status, in contrast, acts as a protective factor for crime, with crime hot spots much less likely to be found at places with wealthier residents (as reflected in higher property values) who assumedly are able to bring into play both formal and informal social controls more effectively. Perhaps most interesting is the very strong impact of collective efficacy in our study, as reflected in voter participation. Collective efficacy seems to act as a strong protective factor for crime at place. Accordingly, the direct situational opportunities that increase crime risk are one part of the crime equation at places, but social factors that act to insulate places from crime risks are another.

*Understanding Crime Waves and Crime Drops*

While we were limited in the time frames that could be examined, we also focused our analysis on how changes in opportunity and social disorganization variables over time were related to increasing and decreasing developmental patterns of crime. One complication in developing this analysis is that many of the opportunity measures simply did not evidence significant change in the study period. This is one reason we argued earlier for the overall stability of crime trends at places that we observe in our study. While factors such as the presence of an arterial road increases dramatically the risk of a street segment being a crime hot spot, the road network is stable over time, and accordingly, change will not be predictive of crime waves and crime drops during the study period. Similarly, other measures of situational opportunities such as bus stops or public facilities are also very stable across the study period, though they also significantly increase the risk of crime at place. Importantly, the fact that many of these measures do not vary strongly across a 16 year period does not indicate that they would not vary across much longer time periods.
Accordingly, it is not surprising that the social disorganization variables that evidence overall greater variability in the time frame examined are found in our analyses to be particularly salient in distinguishing places that have distinct increasing versus decreasing crime trends in the 16 years we observed. Structural measures of social disorganization, such as increasing social disorder and decreasing socio-economic indicators at street segments, are strongly related to increasing crime trends. But mediating variables of social disorganization also are important in distinguishing crime waves from crime drops. Street segments are much more likely to have crime waves if the number of unsupervised teens (as represented by truant juveniles) increases, and much more likely to have crime drops if this number decreases. Similarly, increasing levels of collective efficacy (as measured by percent of active voters on a street) are likely to decrease the risk of crime waves and increase the likelihood of crime drops. These findings again point to the relevance of social disorganization at the street segment level and the importance of including social disorganization perspectives in our understanding of the criminology of place.

While opportunity variables did not figure as prominently in understanding crime waves and crime drops, two indicators that did show significant change at street segments over time remained significant in these analyses. Residential population and number of employees, which were the single most important variables in our general model of developmental crime trends at places, continued to be significant in our understanding of the contrast between increasing and decreasing trajectory patterns. Increases in residential population were associated with increasing crime trends, and decreases with decreasing crime trends. Similarly, increased employment was associated with higher risk of increasing crime at place, and decreasing employment with lower risk.
Recognizing the Tight Coupling of Crime to Place: Policy Implications

We have shown so far that our findings have important implications for our understanding of crime. However, we also think that our study has direct implications for crime prevention policy. Our work reinforces a growing trend in crime prevention that seeks to focus efforts on the context of crime (Brantingham and Brantingham, 1993a; Clarke, 1995; Weisburd, 2002). Specifically, our findings point to the importance of focusing crime prevention efforts on places within communities, and the fact that criminologists and crime prevention practitioners can identify and address particular characteristics of places that are related to developmental crime patterns. Our work suggests that a program of crime prevention at place would have tremendous “efficiency” for police and other crime prevention practitioners (see also Weisburd and Telep, 2010). Efficiency is important because crime prevention resources are limited.

While the efficiency of crime prevention approaches can be defined in a number of different ways, we think it reasonable to begin with a definition of efficiency that suggests that strategies are more efficient to the extent that they offer the same crime prevention value with a smaller number of targets. To the extent that crime is concentrated among a small number of potential targets, the efficiency of crime prevention can be maximized. We find that 5 to 6% of street segments each year include half of all crime incidents. One percent of the street segments in the chronic crime pattern are responsible for more than a fifth of all crime incidents in the city. This means that crime prevention practitioners can focus their resources on relatively few high crime places and deal with a large proportion of the crime problem.

Having noted the efficiency of focusing on crime concentrations at place, it is important to note that crime is also concentrated among offenders, a fact pointed out in research by Marvin Wolfgang and colleagues (1972) more than 30 years ago. Is crime more concentrated at places
than among offenders? We tried to make this comparison using crime incidents from Seattle. Using this approach, we found that on average fewer than 1,500 street segments accounted for 50% of the crime each year during our study period. During the same period about 6,000 offenders were responsible for 50% of the crime each year. Simply stated, the police or other crime prevention practitioners would have to approach four times as many targets to identify the same level of overall crime when they focus on people as opposed to places.

Importantly, as well, places are not “moving targets.” The American Housing Survey from the United States Census Bureau shows that on average Americans move once every seven years (American Housing Survey Branch, 2005). It is reasonable to assume that offenders move even more often than this. Studies have often noted the difficulty of tracking offenders for survey research (Laub and Sampson, 2003; Wolfgang et al., 1987), and it is a common experience of the police to look for an offender and find that he or she no longer lives at the last known address. Place-based crime prevention provides a target that “stays in the same place.” This is not an insignificant issue when considering the investment of crime prevention resources.

Evidence of the stability of crime patterns at places in our work also suggests the possible efficiency of place-based approaches. If there is instability of crime across time at a unit of analysis, then crime prevention strategies will be less efficient. For example, let us say that criminals vary in offending greatly over time with a very high peak in one time period and very low activity in subsequent periods. Investment of resources in incarceration of such offenders may have little real crime prevention benefit, though of course it may satisfy important considerations of just punishments for criminals.

There is perhaps no more established fact in criminology than the variability and instability of offending across the life course (Bushway et al., 2003; Laub and Sampson, 2003;
Nagin, 1999; Robins, 1966). This may be contrasted with the findings in our study. In Chapter 3 we show not only that about the same number of street segments were responsible for 50% of the crime each year, but also that developmental patterns of street segments were overall relatively stable across the study period. This stability suggests that place-based crime prevention will not only be more efficient in terms of the number of targets, but also in the application of interventions to specific targets. A strategy that is focused on chronic hot spot pattern street segments is not likely to be focusing on places that will naturally become cool a year later. The stability of crime at place across time makes crime places a particularly salient focus for investment of crime prevention resources.

*The Threat of Crime Displacement?*

But won’t the focus on specific hot spots of crime simply displace crime to other places (Repetto, 1976)? We have argued in this book that a finding of tight coupling of crime to place, and especially of a relative stability of crime patterns over time, argues against the idea that crime will easily move from place to place. But there is also strong empirical evidence that displacement is not an inevitable outcome of place-based crime prevention, and that it is in fact less common than what Clarke and Weisburd (1994) have termed a “diffusion of crime control benefits.” It is in this context more likely that place-based prevention will lead to areas nearby improving as a result of focused crime prevention than such areas becoming worse due to displacement of crime.

Since 1990 there have been five main reviews of empirical studies that report on displacement: Barr and Pease (1990); Eck (1993); Hesseling (1994); Guerette and Bowers (2009); and Bowers et al. (2011). All five reviews arrive at the same basic conclusions: there is little evidence that crime prevention strategies lead to displacement, and if displacement does
occur it is usually offset by the amount of crime prevented. Guerette and Bowers (2009) examining situational crime prevention strategies generally found that 37% of the observations showed evidence of spatial diffusion of benefits while only 23% showed evidence of spatial displacement. Bower’s et al. (2011), focusing specifically on geographically focused police interventions, found that a diffusion of crime control benefits is a more likely outcome of such initiatives than spatial crime displacement.

One area where the evidence regarding displacement is particularly strong and consistent is spatial displacement as an outcome of hot spots policing. The Campbell systematic reviews on hot spots conducted by Braga and colleagues (Under review; see also Braga, 2001, 2005, 2007) used meta-analysis to examine displacement data for 13 tests, finding an overall small but significant diffusion of crime control benefits across studies. Only one study (Ratcliffe et al., 2011) found evidence of significant crime displacement, and even here the amount of displacement was far less than the main crime prevention benefit of the intervention.

In a recent study by Weisburd and colleagues (2006) of hot spots policing interventions at drug and prostitution markets, similar findings to the Braga et al. (Under review) review were observed using more than 6,000 20-minute social observations at the research sites, supplemented by interviews with arrestees from the target areas and ethnographic field observations. The study, which focused directly on displacement and diffusion (as opposed to measuring displacement as a secondary outcome) supported the position that the most likely outcome of focused crime prevention efforts at places is not displacement but a diffusion of crime control benefits to nearby areas.

These findings are not surprising in the context of our study of developmental patterns of crime at place in Seattle. Our findings emphasize that there are strong links between the
characteristics of places and crime at place. In this context, it is easy to understand resistance to displacement. Crime does not easily move from place to place because crime is tightly coupled to place.\(^5\)

*The Importance of Focusing on “Micro” Places*

Our work also reinforces the importance of focusing in on “micro” places rather than larger geographic units such as communities or police precincts. Our data suggest that crime prevention at larger geographic units is likely to suffer an “ecological fallacy” in which crime prevention resources are spread thinly across large numbers of street segments, when the problems that need to be addressed are concentrated only on some of the street segments in that area. Criminologists and crime prevention practitioners need to recognize that definitions of neighborhoods as “bad” or problematic are likely to miss the fact that many places in such areas have no or little crime. In turn, crime prevention resources should be focused on the hot spots of crime within “good” and “bad” neighborhoods.

Such an approach might also offset public concerns about the fairness of the allocation of crime prevention resources. In many cities today, progressive police chiefs are focusing police services in the poor and disadvantaged neighborhoods where crime problems are of most concern. This strategy, while recognizing that crime is not spread evenly across neighborhoods, is often politically risky, because citizens in wealthier and more socially organized areas will object to police services being moved from their neighborhoods. Our data suggest that a “neighborhood” focus does not recognize that crime hot spots are indeed spread throughout the city, and therefore the police may miss important crime problems if they are focused on “bad communities” rather than “bad places.”
Inevitably, greater investment is likely to be made in specific parts of a city where there are somewhat greater concentrations of problem places (for example, the southeastern part of Seattle), but even better neighborhoods in the city are not likely to be ignored using an approach that places micro conceptions of place at the center of crime prevention. The fact that crime hot spots can be found in “good” as well as “bad” neighborhoods suggests that a focus on the specific places where crime problems are concentrated will lead to tremendous diffusion of crime prevention resources across a city. At a policy level, our research reinforces the importance of initiatives like “hot spots policing,” which address specific streets or areas within larger communities (Braga, 2001; Braga and Weisburd, 2010; Sherman and Weisburd, 1995; Weisburd and Green, 1995). If police become better at recognizing the “good streets” in the more disadvantaged areas and the “bad streets” in the better off communities, they can more efficiently allocate police resources to the specific places that need them the most.

*The Importance of Recognizing Risk and Protective Factors of Places*

Our data also illustrate that criminologists, police, and crime prevention practitioners can identify key characteristics of places that are correlated with crime. We have documented that crime is tightly coupled to place by specific opportunity and social disorganization characteristics of street segments.

The importance of suitable targets and motivated offenders in understanding developmental crime trends at places emphasizes the potential for reducing crime by increasing guardianship. For example, in areas where there are large numbers of employees or larger residential populations, it would seem prudent to also increase police presence. The same is true of streets that are arterial roads, and streets with transportation nodes. But our data suggest not only that places with these characteristics are likely to have crime problems, but that the
introduction of such risk factors may turn a low crime street into a high crime street. When new businesses or factories are opened on streets, or when new residential buildings including large numbers of residents are built, and when new bus or train stops are introduced, the community and the police should prepare to prevent crime problems before they emerge.

Deterrence through increased police presence, or private security, is clearly one way to reduce the risks of crime at place. The very strong evidence regarding the effectiveness of hot spots policing programs reinforces this assumption since increased guardianship is a critical component of such interventions (Braga and Weisburd, 2010). Durlauf and Nagin (2011) emphasize this point in their recent comparisons of the effectiveness of public investment in policing as contrasted with corrections. They argue that there is very strong evidence that deterrence through policing does work and can provide strong crime prevention outcomes. Indeed, the effectiveness of deterrence of crime at place is a major factor in their conclusion that there should be a shift in criminal justice investment from corrections to policing.

But crime prevention through deterrence is not enough. Police officers must be given the support and training to allow a problem-solving orientation to develop (Braga and Weisburd, 2010). Our results indicate the importance of both the social and the physical environment in understanding why some street segments and not their neighbors suffer from high crime rates. These findings provide evidence that police should take a more holistic approach to addressing crime problems. For example, using this information they can more precisely target community building, order maintenance, and more traditional law enforcement operations to maximize efficiency and effectiveness. More broadly, they can work with other city agencies to change the physical and social environments of problem places (Johnson et al., 2008). Alterations to the
built environment that improve surveillance, control access, and increase the capacity for territoriality among legitimate users can reduce crime (Lab, 2007).

Importantly, a discussion of crime prevention opportunities to increase guardianship should not be limited to the police. Programs aimed at making employees of businesses better place managers have the potential to reduce crime (Eck, 1995b; Madensen and Eck, 2008, In press). Place managers such as store employees, parking lot attendants, and bartenders can control specific elements of the environment which increase the risks or reduce the rewards of criminal activities.

A key finding of our work is that social disorganization is also important in the generation of crime hot spots. This suggests that formal social controls, such as law enforcement, may not be enough for effectively altering trajectories of crime at places in the long term (see also Earls, 1991). It may be critical to also consider how the police and other crime prevention agents can influence the social and structural features of hot spots of crime. In this sense, the police and other crime prevention practitioners can try to enhance protective factors that discourage crime on street segments, such as increasing collective efficacy or improving social and economic conditions. In some ways, criminologists have long been concerned with how to alter community dynamics in the long term pursuit of crime reductions. For example, advocates of the “broken windows” perspective have long argued this point, noting that a key role of the police is to reduce fear in communities and through this to empower citizens to reestablish community social control and community norms (Hinkle and Weisburd, 2008; Kelling and Coles, 1996; Wilson and Kelling, 1982). Our work suggests that the role of the police as “watchmen” in local communities should be focused not broadly in communities but specifically at places that evidence serious crime problems.
But if important causal mechanisms underlying developmental patterns of crime at place can be found in factors such as economic deprivation or collective efficacy, as indicated by our work, then a much broader set of social interventions may also be required to change the trajectories of crime at crime hot spots. Is that set of interventions too remote from crime prevention to have relevance for criminal justice and the criminology of place?

The focus on the specific places where crime problems are found provides an opportunity to “lower the scale” of social interventions, and accordingly to make such interventions relevant to crime prevention practitioners. It is one thing to attempt change in the social conditions of an entire neighborhood or city. It is another to try to ameliorate problems on specific blocks. One indication that this is possible comes from Redlands, California, where the police department was able to manage housing and social service resources so that they were focused on specific census tracts where crime problems were most serious (Weisburd, Morris and Ready, 2008). The California example suggests that a focus on even smaller geographic units, such as street segments, is possible. Perhaps the criminology of place provides a scale of intervention that can rekindle interest in the importance of social and structural interventions in doing something about crime.

It may be necessary to focus social interventions more carefully, providing for example, economic support to problematic street blocks and not to neighborhoods overall. And here we return to one of the early reasons why situational crime prevention and opportunity perspective theorists have sometimes ignored broader social aspects of crime prevention. Like the weather, which has also been found to influence crime, social processes such as poverty and social disorganization more generally, were seen to be outside the control of crime prevention practitioners (Clarke, 1995). These were problems that could not be directly impacted by crime
prevention, and therefore thought to be better left as factors we know influence crime but which don’t contribute to the immediate amelioration of crime problems. But the fact that such processes operate on a very micro geographic level offers opportunity for much more targeted efforts to change the social context of places. Crime prevention agents may be able to influence change on specific street blocks, as opposed to cities or neighborhoods more generally.

Given the close relationship between place, crime, and health (Fitzpatrick and LaGory, 2010), it is equally likely that health-related prevention activities might be more effectively implemented at street segments. Promising prevention programs often fail upon general implementation because they are employed in places which are less risky and more heterogeneous (Welsh, Sullivan and Olds, 2010). Focusing on hot spots means programs are addressing the riskiest of micro level places and ones with predominantly homogeneous populations. It is also plausible that core elements of successful neighborhood-level programs such as identifying and mobilizing key leaders, increasing social cohesion, measuring risk and protective factors, and developing interventions (Loeber and Farrington, 1998) can all be used to greater effect when applied at the street segment level.

Our work suggests the importance of focusing crime prevention, whether it is at the level of local police agents or in terms of the development of social programs for hot spots of crime. This idea has also been suggested in recent studies of prisoner reentry. Scholars have identified “million dollar blocks” that include large numbers of people who are in jail or prisons (Cadora et al., 2003). They argue that more could be gained by focusing resources on the street blocks where these prisoners come from, rather than on their incarceration (Clear, 2008). Whatever the approach that is taken, it is time to recognize the need to focus crime prevention resources at micro places such as street segments.
Limitations

While we think our work has contributed a good deal to our knowledge of the criminology of place, we want to note before concluding some specific limitations of our data, and suggest promising areas for future research. Perhaps most significant is the fact that by necessity we were limited to retrospective data collection. We think we have accessed a wide array of data from a large number of data sources. Indeed, we were surprised at the breadth and depth of information that we were able to collect retrospectively. In this context our study includes, to our knowledge, the most comprehensive longitudinal data base ever compiled for a study of places at a very small geographic level.

But having noted that we were able to provide a more in-depth view of crime at place than any prior study we know of, we think it important to recognize that retrospective data collection is by its nature limited. As we noted in Chapters 5 and 6, many of our measures are proxies for variables we would have liked to collect but were unable to identify. For example, we used school and voter information to estimate population statistics at street segments. Sometimes, as we noted earlier, our difficulty in collecting such social data retrospectively developed from the fact that confidentiality requirements prohibit the U.S. Census from allowing access to data at micro levels of geography, such as the street segment. Our study suggests that it is critical to find solutions to this problem of confidentiality, given the importance of micro geographic units in the development of the crime problem.

More generally, there is much we would want to know about street segments that we could not learn simply from collecting official information. For example, people commit crime, and their role in the crime equation is a central one. Certainly, to learn more about the causes of crime at place we would want to know more than we could retrospectively about the people who
live, visit or work on street segments, and the people that offend there. Data on people at places, and narratives of their experiences are certainly necessary to develop a clearer picture of the developmental patterns of crime at place.

We noted earlier the absence of what is a key indicator of guardianship at places—police presence. It is in some sense surprising, given the growing evidence of the importance of place in crime, that Seattle and other large cities have had little ability to know specifically where the police are. Recent innovations suggest that this situation is likely to change. For example, as we noted in Chapter 5 a few police departments in the United States are now using automated vehicle locator systems (AVL) to keep track of where police patrol is concentrated. But such data were not available in Seattle, nor in other cities, for the time span we examine.

These limitations regarding data available for our study suggest the importance of a prospective longitudinal study of crime at place that would capture at specific times both the characteristics of places and people (see Weisburd, Lawton and Ready, In press). Such studies are common in studies of human development more generally (e.g. see Browning, Thornberry and Porter, 1999; Elliott, Huizinga and Ageton, 1985; Loeber et al., 2001; Moffitt, Lynam and Silva, 1994), though they are expensive to conduct and take patience and a long term perspective on knowledge by funders. However, our data suggest the importance of such studies. What we have learned already implies that crime places should be an important focus for future prospective longitudinal study.

*Focusing on Different Time Periods and Specific Types of Crime*

Another limitation of our study is that we emphasize long term crime trends, and do not examine trends within more limited time periods. While others have shown strong variability in crime across a daily cycle (e.g. see Bromley and Nelson, 2002; Felson and Poulsen, 2001;
Gottfredson, Gottfredson and Weisman, 2001), our concern has been with the variability of crime across a 16 year period. In this regard, our study does not examine crime trends within years, and is thus not sensitive to the seasonal variation in crime that some scholars have observed (e.g. see Ceccato, 2005; Cohn and Rotton, 2000; Farrell and Pease, 1994; Hipp et al., 2004). Our neglect of these questions does not reflect a conclusion that such variation of crime across the day, or across seasons is not important. Rather in looking to yearly trends in crime we did not focus our lens on these questions.

A similar limitation develops from our decision to focus on crime and disorder as a general phenomenon at street segments. A number of other scholars have begun also to consider the specific trends of specific crimes at place (Braga et al., 2010; Weisburd, Groff and Morris, 2009; Yang, 2010). Such trends are important, but given the very small unit of analysis we have chosen, analyses of very specific crime patterns would have been limited. Our concern was with the overall trends in crime across street segments over a 16 year period. We recognize the importance of specific inquiries for specific crimes, but such analyses were beyond the scope of our research.

Limitations in Drawing Causal Inferences

Like other studies that take a broad approach to understanding and modeling crime, it is important to recognize as well that our specific approach to crime and place limits conclusions that can be reached in our study. While we examine the correlates of developmental crime patterns at places, we cannot make unambiguous statements about the causal patterns underlying our data. For example, reports of physical disorder are very strongly correlated with street segment presence in more serious or chronic crime trajectory patterns. But our data do not allow us to establish that physical disorder leads to more serious crime problems. Even though we find
that changes in physical disorder and changes in crime are related, it may be that a third cause unmeasured in our analysis is in fact the ultimate cause of the relationships observed (Yang, 2010). This limitation is not unique to our study, but one that affects observational studies more generally (Shadish, Cook and Campbell, 2002).

Prospective longitudinal studies would allow researchers to develop more careful analyses of causal patterns across time. We have already noted the importance of such prospective longitudinal research. But we also think that our work suggests the importance of experimental studies of crime and place. Randomized experiments are generally most useful when there are strong basic research findings suggesting underlying causal relationships (Lipsey et al., 2006; Weisburd and Hinkle, 2012). Randomized experiments are not efficient tools for identifying possible patterns, but rather for testing them. When implemented properly they are the clearest method for establishing cause and effect (Cook and Campbell, 1979; Farrington, 2003; Weisburd, 2003). Our work has raised a number of propositions regarding the relationship between opportunity and social disorganization and developmental crime trends. We would hope that future researchers when developing prospective studies would also build into their designs experimental manipulations based on what is already known about crime at place (for a similar suggestion regarding studies of individual criminality, see Farrington, Ohlin and Wilson, 1986).

Linked to this concern with the internal validity of our causal findings is the question of whether we can make generalizations beyond Seattle. Is there reason to believe that our findings would be restricted to the city of Seattle? The overall trends of concentration of crime would suggest that they are not, since studies in a number of jurisdictions have shown similar concentrations of crime, at least using cross sectional data (e.g. see Eck et al., 2000; Sherman et
al., 1989; Pierce et al., 1988; Spelman, 1995, Weisburd and Mazerolle, 2000; Weisburd and Amram, In progress). But absent other studies that look at developmental crime patterns at places we cannot make any certain statement about the generalizeability of our data. Again, we encourage other researchers to replicate our work in other jurisdictions. This is essential if we are to build a science of the criminology of place.

Conclusions

For most of the last century criminologists and crime prevention practitioners have tried to understand why people become involved in crime and what programs can be developed to discourage criminality. Our work suggests that it is time to consider another approach to the crime problem that begins not with the people who commit crime but the places where crimes are committed. Our work shows that street segments in the city of Seattle represent a key unit for understanding the crime problem. This is not the geographic unit of communities, neighborhoods, precincts or police beats that have generally been the focus of criminologists or crime prevention practitioners, but our study shows that our understanding of crime and our ability to ameliorate crime problems should be strongly linked to such micro crime places.

Crime varies greatly at a very small geographic level, as do the opportunities for crime and social factors related to crime. Crime places, often as small as street segments, are small social systems, and in this sense a key building block in understanding the crime problem. We have shown that crime is tightly coupled to place. That tight coupling in turn provides an opportunity for the development of successful crime prevention programs. It is time to place greater emphasis in crime prevention on the importance of “neighbors next door” and the ways in which the opportunities for crime at place, and the social fabric of places, jointly produce crime in cities.
See Chapter 1 for a discussion of behavior settings.

Of course, as noted in Chapter 6, some scholars argue that both disorder and crime are products of other social forces (see also our discussion of limitations later in the chapter). While we recognize that the relationship here may not be causal, there is a strong correlation in our data between physical disorder and crime. This relationship is consistent with social disorganization theory.

In correspondence with Marcus Felson, he argued that this mechanism, as well as other social disorganization processes, may in the end reflect routine activity mechanisms. For example, SES may be a proxy for likely offenders and potential targets. More housing assistance and public housing in this context may simply be measuring the fact that there are more opportunities for crime (perhaps because of larger numbers of potential offenders) in poorer areas. While we recognize that concepts in the theoretical perspectives we examine may overlap, the fact that SES continues to have salience in our models after controlling for a series of opportunity measures indicates that it stands as an independent correlate of crime at place.

However, the trend was only statistically significant for the low crime comparison.

For a more detailed discussion of the relationship between the tight coupling of crime and place and displacement, see Weisburd and Telep (2012). Additionally, see recent work by Brantingham and Brantingham (2003) as well as Eck and Madensen (2009) on how we can use the characteristics of crime events and places to identify areas where displacement is more likely when it does occur.

It is interesting in this regard that an evaluation of the Redlands program (Weisburd et al., 2008) suggested that a reason for failure of the intervention was the relatively larger areas that were the focus of police interventions. Our work suggests that such socially-based interventions would be better focused on street segments than census block groups.