Article

Institutionalizing Place-Based Approaches: Opening 'Cases' on Gun Crime Hot Spots[1]

Christopher S. Koper*, Sergeant Jeffery Egge** and Cynthia Lum***

Abstract Despite the advancement of hot spot policing in research and practice, more effort is needed to develop and institutionalize hot spot strategies and to make problem places a more central focus of everyday police operations. To this end, we advocate a 'case of place' strategy that broadens the focus of investigative work to include places as well as people. This approach entails systematic investigation and tracking of hot spots to develop problem-solving interventions tailored to specific places. To illustrate how an agency might use this approach, we describe preliminary efforts by the Minneapolis Police Department (MPD) to build investigative case files on hot spots of gun violence. We identify Minneapolis's top street segments for shootings over 25 years and examine selected aspects of their criminal histories and features. We consider the implications of this work for addressing gun violence at these locations and developing investigative systems to strengthen hot spot policing.

The growing importance of places and place-based prevention in policing

Although contemporary police practices are still very much focused on individual offenders and crimes, places and place-based prevention have arguably become more important to law enforcement operations. Most significantly, 'hot spot' policing—i.e. policing focused on small geographic areas or places where crime is concentrated—has been one of the most significant policing innovations of recent years. Numerous studies show that crime is highly concentrated at a very small percentage of identifiable places in most jurisdictions (e.g. Pierce *et al.*, 1988; Sherman *et al.*, 1989a; Weisburd *et al.*, 2004; Weisburd, 2015) and that police interventions focused on these locations can prevent crime without displacing it elsewhere (see reviews in Sherman and Eck, 2002; National Research Council, 2004; Lum *et al.*, 2011; Braga *et al.*, 2012; Telep and Weisburd, 2012). Advancements in information technology and geographic

*Department of Criminology, Law & Society, Center for Evidence-Based Crime Policy, George Mason University, Fairfax, VA, USA. E-mail: ckoper2@gmu.edu

**Crime Analysis Unit, Minneapolis (Minnesota) Police Department, MN, USA

***Department of Criminology, Law & Society, Center for Evidence-Based Crime Policy, George Mason University, Fairfax, VA, USA

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information systems have helped to make hot spot policing commonplace (Weisburd and Lum, 2005; Reaves, 2010; Burch, 2012), and police cite this strategy as a leading approach to the reduction of violence and other crime problems (Police Executive Research Forum, 2007, 2008).

Hot spots are excellent locations for police crime prevention efforts, as they are often nodes for business, leisure, and/or travel activities that commonly have features or facilities that create criminal opportunities and facilitate offending (Eck and Weisburd, 1995). In the language of routine activities theory (Cohen and Felson, 1979; Sherman *et al.*, 1989a), they are places that bring together motivated offenders, suitable targets, and an absence of capable guardians. Examples include locations with bars, convenience stores, parks, bus depots, apartment buildings, parking lots, shopping centers, motels or hotels, adult businesses, and the like (e.g. Sherman *et al.*, 1989a, p. 45; Braga *et al.*, 1999, pp. 551–552; see also Eck and Weisburd, 1995). In related perspectives on crime opportunity (e.g. crime pattern theory and rational choice theory), such locations are also referred to 'crime facilitators', 'crime attractors', or 'risky facilities' (e.g. see Felson, 1987; Brantingham and Brantingham, 1991).

Although many types of police activities are helpful in managing hot spots, evaluation studies suggest that interventions grounded in problem-oriented policing (POP) are generally most effective (Braga and Bond, 2008; Taylor *et al.*, 2011; Braga *et al.*, 2012; but see also Groff *et al.*, 2015). The POP model of policing, first articulated by Goldstein (1979, 1990), calls for police to transcend reactive incident-driven policing by studying and addressing underlying problems that contribute to crime and disorder in the community. Goldstein's notion was for police to take proactive, preventive action against the causes of continuing crime and disorder issues. Further, Goldstein argued that police responses to these problems should not be limited to traditional law enforcement actions but, rather, should also include the use of civil law and reliance on other municipal and community resources. Eck and Spelman (1987) later developed the well-known SARA model for implementing POP, which consists of four steps: scanning for problems, analysis of problems, development and implementation of responses, and follow-up assessment of results. POP thus represents a process of identifying problems and developing responses rather than any specific type(s) of response. Practitioners also rate problem-solving as a leading strategy for addressing hot spots (Koper, 2014). Indeed, POP may be particularly effective in the context of hot spots policing (see also Weisburd *et al.*, 2010) insofar as focusing attention on these very specific locations can help officers to identify tangible conditions that contribute to crime and disorder at these places and to develop both enforcement and prevention measures tailored to the particulars of these places and their problems. In addition to targeted enforcement actions, reported problem-solving efforts at hot spots have often included measures such as situational crime prevention, nuisance abatement, clean-up activities, and improvement of social services (e.g. Sherman *et al.*, 1989b; Eck and Wartell, 1998; Braga *et al.*, 1999; Mazerolle *et al.*, 2000a,b; Eck, 2002; Braga and Bond, 2008; Weisburd *et al.*, 2010; Taylor *et al.*, 2011). Police often implement such measures in cooperation with place managers (Eck, 1994) and other stakeholders (such as business owners and managers, residents, and other government agencies) with interests in or responsibility for the area.

Yet despite these developments, there is arguably much more that needs to be done to develop, translate, and institutionalize this approach in law enforcement operations (Lum, 2009). For example, Koper's (2014) assessment of hot spots policing practices as reported by (mostly) American police agencies suggests that current practices could be improved through a more precise geographic focus (police often use the term hot spot loosely to refer to larger areas like neighbourhoods and patrol beats as well as micro hot spots, like specific

addresses or street blocks, where crime is most concentrated), a greater emphasis on chronic hot spots and problem-solving approaches to address their criminogenic features (police tend to emphasize short-term identification and enforcement responses to hot spots), and further evaluation to determine optimal strategies and dosages for different types of hot spots as defined by crime problems and other characteristics. Others have also noted that POP efforts in practice often fall short of the POP ideal in that they involve limited analysis, limited community partnership efforts, and heavy reliance on enforcement tactics and other relatively easy situational crime prevention responses—what some have called 'shallow' problem-solving (e.g. Cordner and Bielbel, 2005; Braga and Weisburd, 2006; Eck, 2006; Braga and Bond, 2008).

Moreover, it can be argued that place-based prevention is still not a central focus of police operations (Weisburd, 2002, 2008). In many agencies, problem-solving approaches to hot spots are likely to be *ad hoc* or limited to specialized units—and thus not a feature of regular patrol or investigative operations. Further, many officers and detectives may not see the value in these approaches (e.g. Lum *et al.*, 2012; Koper *et al.*, 2015). While there likely have been many attempts to incorporate problem solving at places using specialized units, overtime assignments, and other incentives, the mainstays of the standard model of policing—reactive beat patrol, case-by-case investigations, and answering 911 calls—continue to dominate policing.

Investigating places, not just people

Advancing place-based prevention efforts will require police to place more emphasis on regularly investigating, tracking, and managing problem places, consistent with Sherman's (2013) 'Triple-T' strategy of targeting, tracking, and testing in police operations. In part, this will require police to collect more systematic data on crime trends, problems, actors, social and physical features, and interventions at hot spots (Weisburd, 2008).

However, Lum (2009) argues that police and scholars must also figure out how to translate and incorporate research findings on places and place-based prevention into everyday systems of policing (see also Lum *et al.*, 2011; Lum *et al.*, 2012; Lum and Koper, 2012). The POP and SARA concepts were important developments towards this goal. Nonetheless, police have continued to treat problem-solving as tangential to the core policing function. This may be because SARA, while providing a very logical framework for problem-solving, does not easily fit within existing systems of policing. Hence, finding better ways to incorporate research-based innovations into existing organizational systems is needed.

To facilitate this, Lum and Koper (2012) have proposed a 'case of place' strategy that involves applying a very familiar policing method—investigative case processing—to a different type of 'suspect', i.e. a problem place. In other words, the case of place approach encourages police to change their typical unit of investigation from a person who is suspected of having committed a crime to a place that is connected to numerous crimes. The notion is that 'arresting' a problem place with proactive, problem-oriented crime prevention strategies may have a much greater effect on crime than solving any one case or arresting an individual offender (see also Spelman and Eck, 1989; Sherman, 1995; Weisburd, 2008; Nagin *et al.*, 2015).

Following the case of place strategy, police are encouraged to open investigative case files on problem places but with the standard elements of a detective's case folder translated into place-based equivalents. For example, a 'suspect' in a case of place might be a person or group, a building, a business, or something in the location's physical environment that causes crime. Similarly, 'victims' might be people, businesses, or properties, while 'witnesses' or 'informants' might be residents, business people, or even technologies (such as CCTV cameras) that can serve as guardians of the location.

The detective team (which could consist of detectives, officers, and crime analysts) would seek out clues and evidence about suspects, victims, and witnesses, building a case on the place for the 'arrest' (i.e. the intervention or problem-solving strategy). This would entail quantitative and qualitative analyses of a location's crime patterns and trends; specific persons or groups who are linked to crime problems at the location, particularly as repeat offenders or victims; specific problem addresses that are the subject of repeat calls; businesses (e.g. convenience stores and bars), and environmental conditions (e.g. poorly lit areas and abandoned buildings or vehicles) that may cause, facilitate, or attract crime; and the presence of non-police guardians (e.g. business owners, apartment managers, officials of other government agencies, community groups, or even surveillance technologies) that might assist police in their efforts to deter offending and address problems.[2] Table 1 illustrates in more detail how the typical elements of a detective's case folder are translated into place-based equivalents with the case of place approach. In summary, the case of place method provides a means by which police can systematically create an institutional record (i.e. an investigative case file) documenting the dynamics of a crime hot spot and efforts to address problems at the location over time.[3]

Moreover, by grounding a place-based, problem-solving approach within investigative practices, police can capitalize on the familiarity of existing systems of investigation—as well as the status of investigations—to incentivize its use. Indeed, assigning detectives to investigate problem places could be one way of integrating them more formally into hot spots policing and expanding their role in proactive crime prevention efforts (see also Braga *et al.*, 2011). The case of place strategy could also improve the integration of crime analysis into everyday police work (Taylor and Boba, 2011; Lum, 2013) and constitute an important aspect of intelligence-led policing strategies (Ratcliffe, 2008). Treating places as units of investigation conveys the message that the control of problem places should receive similar resources and priority as those afforded to investigating individual crimes and people.

Opening case files on gun crime hot spots in Minneapolis, MN

As an example of the case of place approach, we describe preliminary efforts by the MPD to open case files on hot spots of gun crime in Minneapolis, MN, a city of approximately 400,000 people located in the Midwestern region of the USA (see www.factfinder.census.gov). Minneapolis experienced 4,038 serious violent crimes in 2013, giving it a violent crime rate per population about one-third higher than the overall rate for US cities of similar size.[4] In recent years, moreover, the city has had roughly 1,300–1,450 murders, assaults, and robberies committed with guns annually.[5] The MPD, a municipal agency of 842 officers and 169 civilians, has primary responsibility for policing the city. MPD is currently looking for ways to better target its hot spots policing efforts and to develop more holistic responses to these locations that combine

[2] The case of place concept draws from theoretical perspectives on criminal opportunities and routine activities, as well as practice-based innovations in situational crime prevention, problem-solving, intelligence-led policing, and crime prevention through environmental design.

[3] Additional resources and guides that police can use to develop case files on problem places are available at: http://cebcp.org/evidence-based-policing/the-matrix/matrix-demonstration-project/case-of-places/.

[4] These statistics were calculated from crime figures available from the U.S. Federal Bureau of Investigation at: http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2013/crime-in-the-u.s.-2013/violent-crime/violent-crime-topic-page/violentcrimemain_final.

[5] In 2011, over 11,000 people were murdered with firearms in the USA and another 467,300 were the victims of non-fatal firearm crimes (Planty and Truman, 2013). Gun violence is a particularly serious concern for American police agencies in urban areas where gun violence is concentrated.

Table 1: Summary elements of the 'case of place' approach

Crime history of the place: This is equivalent to the crime incident in a traditional investigation. The location's problem is what initiates the investigation and case folder.	Information collected includes: • Short and long-term criminal history trends for the location as reflected in calls for service, incident reports, and arrests • Other agency and community information about the location (e.g. from crime analysis, officers who work in the area, and community members) • Other local and public records (e.g. Census data and records on facilities, code violations, etc.) • Initial surveillance observations
Place-based suspects: For places, 'suspects' might be individuals, businesses, specific locations, or environmental conditions that cause problems at the location.	• Active/known offenders in the area (e.g. arrestees, probationers and parolees, gang members, etc.) • Specific problem locations (e.g. addresses or businesses causing repeat problems and other specific types of problem places such as transit locations, parks, and empty lots) • Environmental problems like poor lighting, physical disorder, and vulnerable locations
Place-based victims: For places, 'victims' may be individuals, groups, businesses, or properties that are victimized as well as the community at large (which suffers loss of quality of life)	• Groups/types of people who are victimized as well as specific individual victims (particularly repeat victims) • Businesses and/or properties that have been victimized particularly on a repeated basis • The broader harms on the community (e.g. fear of crime)
Place-based guardians: Individuals, groups, or physical features that have the potential to handle or deter problems. They may also function as informants and witnesses for police	• Non-police and informal guardians (e.g. residents, business owners, place managers, and community leaders) • Formal police and government guardians (e.g. officers who work in the area, probation/parole officers, city managers/council members, code enforcement personnel, city attorneys, private security) • Technology and physical features that may deter crime (e.g. CCTV, fences, signage, etc.)
Intervention: The 'arrest' of a place should be a comprehensive effort to address its problems	• Documentation of prior police and community efforts • Research evidence on what works for this problem • Documentation of new interventions and results

More detailed guides and forms for the 'case of place' strategy and tool are available online at: http://cebcp.org/evidence-based-policing/the-matrix/matrix-demonstration-project/case-of-places/.

enforcement and prevention measures in collaboration with other government and community partners. To this end, MPD's crime analysis unit has taken the initiative to better understand the city's gun crime hot spots as a preliminary step towards developing a case of place approach.

The analyses presented here focus on shootings, which MPD analysts define to include fatal and non-fatal criminal gunshot victimizations, assaults in which assailants fired at victims, and other serious gun discharge incidents. Our objectives in this initial study were to identify long-term shooting hot spots and to begin building profiles of the physical and social features of these locations that may help to explain the nature of their crime problems and lay the foundations for case of place investigations.

Identifying the suspects of investigation

For many agencies, adopting a case of place approach will require adjustments to their methods

of crime analysis. For starters, the identification of chronic problem locations requires attention to long-term patterns at hot spots (just as one might focus on a 'repeat' or 'serious' offender). Although MPD analysts often examine crime patterns over 1- to 5-year periods (which is a longer time frame than that used by most agencies for hot spot identification—see Koper, 2014), we used a more extensive historical analysis to search for chronic shooting hot spots, analyzing data from the 25-year period of 1990 through 2014. During this time, there were 16,144 shooting incidents in Minneapolis, resulting in an annual average of 646. The peak years for shootings were 1994–98 and 2004–06, when there were between 700 and 1,000 annually. During the last 5 years, the city has averaged 568 shootings per year. However, shootings rose 18% from 522 in 2012 to 617 in 2014, reaching their highest level since 2008.

In addition, the case of place approach is meant to focus attention on micro hot spots where crime is most concentrated and where specific criminogenic conditions can be most readily identified and addressed through problem-solving. This may require police to shift their analyses and operational emphasis to smaller geographic units than that to which they are accustomed (e.g. see Koper, 2014). Analysis of crime at street segments has become very common in hot spots research, including investigations of gun crime (Braga *et al.*, 2010), as studies have illustrated the concentration of crime at particular blocks and shown that crime can vary substantially from street to street even within high-crime areas (e.g. Sherman *et al.*, 1989a; Weisburd *et al.*, 2004, 2012). Moreover, scholars argue that street segments are key behaviour settings for understanding human interactions; at the street block level, people are more familiar with one another and their routines, and behavioural norms and routines are more established (Wicker, 1987; Taylor, 1997, 1998; Weisburd *et al.*, 2012).

For some years, MPD's primary method of identifying hot spots has been to identify clusters of high-risk blocks using kernel density analysis. MPD crime analysts draw boundaries around these clusters, creating 'focus zones' that commanders use to guide operations. Although the size of these places vary, a typical one might be roughly 0.25 square miles. However, to more specifically identify 'suspects' for a case of place strategy, we further narrowed MPD's geographic analyses to the street block level, which allows for a more precise identification of the convergence of offenders, targets, and opportunities that lead to crime. As noted, this can facilitate the development of more targeted problem-solving efforts even within MPD's original hot spot zones.

Our 25-year analysis of the distribution of shootings at street segments in Minneapolis is displayed in Table 2, which is modelled after Braga *et al.*'s (2010) analysis of shootings in the American city of Boston, MA from 1980 through 2008. As expected, shootings in Minneapolis have been highly concentrated by street segment over time. As shown in Table 2, 31% of street segments in Minneapolis experienced at least one shooting incident from 1990 through 2014.[6] Three-quarters of these blocks had less than five shootings each and together accounted for just over a third of the city's shootings. In contrast, the roughly 8% of all street blocks that had five or more shootings accounted for about two-thirds (64%) of the city's shootings. At the upper end of the distribution, 386 blocks, representing just 2.8% of all the city's blocks, had 10 or more shootings each and accounted for more than one-third (36%) of shootings.[7]

[6] Note that Table 2 is based on 16,029 of the 16,144 shootings that occurred during the study period. The remaining 115 shootings (less than 1%) could not be geocoded to a street segment.

[7] As a side note, the Minneapolis data show considerably less street-level concentration than in Boston, where Braga *et al.* (2010) found that 12% of street segments accounted for all shootings in the city and 5% of street segments accounted for approximately three-quarters of shootings. One possible reason for this difference is that Braga *et al.* focused on shooting incidents that resulted in gunshot victimizations, whereas our study also includes any incident involving gunfire.

Table 2: Distribution of shooting incidents at street segments in Minneapolis, 1990–2014

Incidents per segment	Number of street segments	Percentage of street segments	Cumulative percent of street segments	Number of incidents	Percentage of incidents	Cumulative percent of incidents
10 or more	386	2.8	2.8	5,844	36.4	36.4
5–9	678	4.9	7.7	4,462	27.8	64.2
2–4	1,461	10.6	18.3	3,932	24.5	88.7
1	1,791	13.0	31.3	1,791	11.1	99.8
0	9,432	68.6	100	0	0	
Total	13,748			16,029		

Percentages may not sum to 100% due to rounding.

Based on this analysis, the 'suspects' selected for preliminary investigation include the 31 blocks that averaged at least one shooting per year during the study period. These blocks, which are concentrated in the northwest and southeast portions of the city,[8] had an average of 31 shootings (and a median of 30) from 1990 through 2014, with a range of 25 to 66; in total, they produced 973 (Table 3). Their annual averages ranged from 1 to 2.64. As gun crime has fallen in recent years, so too have shootings at these segments. However, nearly half of them (48%) continued to produce one or more shootings annually during the last 3–5 years. Considering these numbers, it would seem that targeting these locations for investigation and intervention offers a potentially much greater return on investment than the resources that a police agency would typically apply to the investigation of any one shooting or shooting suspect. (Indeed, consider the likelihood of identifying 31 people responsible for 973 shootings.)

Building cases on problem places and assessing implications

In a traditional incident or offender-focused investigation, an investigator's early steps involve collecting information on a criminal incident and examining the criminal histories of potential suspects. In a similar manner, a case of place investigation involves gathering further information on the criminal histories of hot spots to better understand their full range of crime problems. This can involve analysing a variety of data sources from within a police agency (e.g. calls for service, incident reports, arrests, intelligence, and observations of officers working the area) as well as information from community sources (e.g. views of community members or data from other government agencies) (see Table 1). As a first step in building such histories on the selected shooting hot spots, we conducted a preliminary assessment of other recent crime and disorder problems at these places as measured by calls for service and gang contacts recorded by MPD officers.

As shown in Table 3, approximately three-quarters of the top shooting blocks (23 of 31) are located within larger MPD focus zones for violent crime, a point to which we return. An examination of the top calls for service categories (citizen-initiated) at all 31 blocks during 2014 revealed that domestic disturbances were among the top three call categories at just over half of the blocks (51%). Further analysis of domestic calls during the last seven years revealed that domestic abuse calls in particular accounted for more than one-quarter of domestic calls at all of these segments and for one-third or more of domestic calls at 90% of the segments. Other leading categories of calls at the highlighted segments during 2014 included general disturbances and a variety of miscellaneous problems. Drug calls were among the top three call

[8] One of the city's four police districts accounts for roughly half of the city's shootings that occur, while one additional district accounts for one-third. The selected shooting hot spots are concentrated in these two districts.

Table 3: Selected crime and calls for service statistics for the top 31 street segments for shootings in Minneapolis, 1990–2014

Total number of shootings, 1990–2014	973
Average number of shootings, 1990–2014	31.4
Average number of shootings, 2010–14	4.7
Percentage within MPD violent crime focus zone	74
Percentage with domestic disturbances among top three calls for service categories	51
Percentage with substantial gang presence (more than 10 contacts in 2014)	39

categories in only four (13%) of the segments, suggesting that drug problems have not been a primary cause of violence and shootings at most of these places. However, police recorded contacts with gang members at nearly all of these blocks (29 of 31) during 2014, and they recorded 10 or more such contacts at 39% (12 of 31).

These patterns point towards potentially important actors—both suspects and victims—that police might investigate further at these places. For example, interventions targeting gang members may be needed in many of the hot spots. Officers might also explore possible connections between domestic violence and shootings. For example, how many shootings at the hot spots occur in the course of domestic violence or stem directly from prior domestic incidents? Are persons involved in domestic violence as offenders or victims likely to be involved in non-domestic shootings at these places?[9] Might strengthening police responses and partnerships to address domestic violence prove to be an important aspect of prevention efforts at these hot spots?

In the context of a case of place investigation, suspects, victims, and potential guardians may be specific individuals or groups tied to the location, or even more general categories of people (e.g. people robbed near check cashing businesses on paydays). At the same time, they may also include particular addresses, establishments, or features of a hot spot that affect its risk for crime (see Table 1). Drawing on public and other government data readily available to MPD, we therefore looked for the presence of several types of establishments, facilities, and features that might contribute to or facilitate crime in the shooting hot spots. These characteristics include the type of street at the location as well as the presence of the following on or nearby the street segment: commercial businesses, particularly grocery or convenience stores and places that sell or serve alcohol; multifamily dwellings, particularly apartment complexes; group facilities (i.e. halfway houses); schools;[10] problem properties; and vacant land parcels. These characteristics and features may serve as possible 'suspects' or 'victims' in the case of place vernacular or lead to the identification of potential 'guardians' (e.g. place managers) who can assist police (see Table 1). As with our analyses of the locations' criminal histories, this is not intended to be a comprehensive list of potentially important characteristics but, rather, a first pass assessment to begin longer term efforts to investigate these places.[11]

As shown in Table 4, the shooting hot spots commonly have environmental characteristics or establishments that might serve as crime attractors or facilitators. About half of the segments are on or very near major roadways, and nearly three-quarters have one or more bus stops. This makes them more accessible, potentially increasing the convergence of potential offenders and victims. Other common establishments that may serve as

[9] MPD analysts believe they routinely see evidence of such connections in agency records spanning many years (e.g. children exposed to violence in the past becoming the serious chronic offenders of today). For research on the links between child abuse, exposure to family violence, and later risks for serious offending, see, for example, Widom and Maxfield (2001), Lipsey and Derzon (1998), and the U.S. Department of Health and Human Services (2001).

[10] This includes various types of small, specialized schools and academies as well as large general schools (public and private).

[11] Others have conducted similar assessments of the characteristics and features of crime hot spots (e.g. Block and Block, 1995; Groff and Lockwood, 2014; Weisburd *et al.*, 2012). Our emphasis here, however, is on exploring the implications of these analyses for implementing a case of place approach to addressing hot spots.

Table 4: Selected characteristics and establishments of the top 31 street segments for shootings in Minneapolis, 1990–2014

Selected feature	Percentage of segments with feature
Major street or very near major street	48
Bus stop(s)	71
Rental apartment building(s)	35
Grocery/convenience store within one block	77
Alcohol establishment within one block	13
Problem property(ies) within one block	58
Vacant lot(s)	71
School(s)	32
Group residence(s) (i.e. halfway houses)	6

activity magnets for offenders and targets include grocery or convenience stores, which are present on more than three-quarters of the blocks, as well as apartment buildings and schools, which are each present on roughly one-third of the blocks. Most of the blocks also have other features that might contribute to crime problems. More than three-quarters have vacant lots, and more than half have problem properties (i.e. locations identified by city authorities for nuisance problems) located within one block. Finally, a smaller number have group residences (i.e. halfway houses) (6%) or establishments serving alcohol (13%) on the block or very nearby. On average, our highlighted blocks have four of the features listed in Table 4, and all of them have at least one.

Additional site-specific investigation will be necessary to better understand the opportunity structures that contribute to violence at these places. However, these noted features and establishments provide obvious starting points for problem-solving assessments. For instance, we can reasonably speculate that convenience stores, bus stops, and vacant lots, which are all very common at these locations, are important in drawing potential victims to the hot spots (especially stores and bus stops). They may also serve as locations for loitering by high-risk people (as one of the authors found recently when conducting onsite observations at a convenience store located in one of our study hot spots). Developing interventions to prevent crime at these types of problem places (e.g. installing video cameras at locations that draw victims and troublesome groups) might thus be important initial steps in reducing their risk of shootings.

Finally, we extended our preliminary investigation to the environment surrounding these street segments. The occurrence of crime at hot spots can often be linked to social features and happenings of nearby places, and crime problems may extend across multiple street segments (Weisburd *et al.*, 2012). Studies of offenders' travel patterns also suggest that many crimes committed at high-risk blocks are likely to have been committed by offenders who currently live or previously lived nearby if not on the blocks (e.g. see reviews in Gabor and Gottheil, 1984; Eck and Weisburd, 1995; see also Bernasco, 2010; Weisburd *et al.*, 2012). Understanding these patterns may thus prove important in understanding the dynamics of a hot spot and developing interventions to reduce crime at the location.

As noted, many of the top shooting blocks are located within larger hot spot clusters for violent crime. As an example, Fig. 1 illustrates several dozen high-risk blocks within one of MPD's larger focus zones. In total, the street blocks in this area experienced 658 shootings from 1990 through 2014. Three of these segments (highlighted in bold) are among the top 31 shooting blocks discussed above and together accounted for 121 shootings. The leading block had 66 shootings and was the top street segment for shootings in the entire city. This block, which is the site of large public housing complex, generates almost 120 domestic disturbance calls a year and has a heavy gang presence that includes several rival gangs (police recorded 70 gang contacts there in 2014). The next two most dangerous segments in this cluster, which

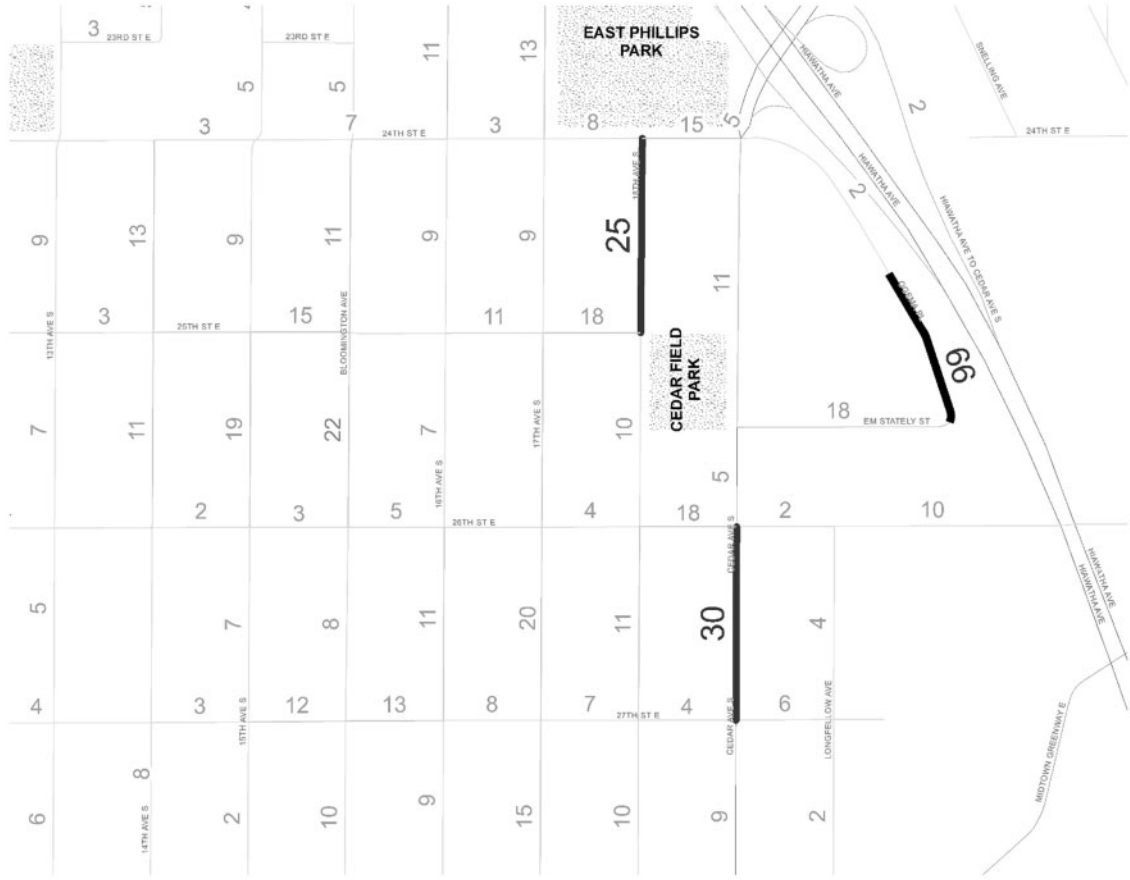

Figure 1: Illustrative cluster of street segments at high risk for shootings in Minneapolis, 1990–2014
The displayed street segments are from a section of the East Phillips neighbourhood in Minneapolis. The bolded lines represent segments among the top 31 street segments for shootings (see segments marked 66, 30, and 25).

experienced 25–30 shootings each during the study period, are located just a few blocks from the aforementioned housing complex and appear to be key activity nodes for people in the vicinity. One is a major avenue with a grocery/convenience store, bus stops, and rental apartments; the other has rental apartments, multiple schools, and close proximity to two parks. Both segments also have an active gang presence as well as other risk factors discussed above. These three blocks would appear to be the most important segments (or certainly among them) for understanding and addressing violence problems in the larger zone. A more in-depth case of place analysis might thus investigate possible interconnections between actors (i.e. offenders, targets, and guardians), routine activities, and crime problems across these top segments and others in the zone (note that there are several other blocks in this vicinity that also experienced more than 10 shootings during the study period). Hence, the identification and cross-referencing of known offenders, victims, and associates in both the hot spot and wider zone might be one valuable avenue of investigation.

Concluding comments

This study illustrates the first steps in opening 'case of place' investigations to address hot spots of gun violence in Minneapolis. This preliminary analysis

has identified candidate locations for investigation, examined potential 'suspects' or 'victims' associated with these places, and considered the types of 'evidence' that might be gathered to facilitate 'arrests' of these places through problem-solving efforts. Much more in-depth research, based on analysis of police and non-police records as well as onsite observations and interviews, will be necessary to more fully understand the social milieu and crime problems at the hot spots profiled in this study and to develop enforcement and prevention strategies tailored to each of these places (e.g. see Tate *et al.*, 2013 for a case of place investigation of a single hot spot in Richmond, Virginia). Nonetheless, MPD has taken a significant step (and one that is likely rare among police) in identifying chronic micro-place hot spots and compiling systematic data on their characteristics.

Moreover, this discussion highlights the potential for institutionalizing innovation in a high-status policing activity—investigations. This will require the commitment of detectives, patrol officers, and crime analysts to collaboratively investigate hot spots, develop tailored interventions for them, and follow through on assessment of results and continued monitoring. Expending as many resources on place-based investigations as police do on individual investigations of people seems justified given what research shows about the benefits of focusing on crime hot spots. This may also raise the status of crime analysis, which is an essential component of crime prevention and proactive policing. By providing analytic support to a case of place strategy (i.e. identifying hot spots for investigation, assessing their common features and problems, and helping to track and evaluate interventions), crime analysts can help to facilitate the development, testing, and dissemination of common strategies that officers can use to address different types of hot spots. Moving forward, we hope the adoption of a case of place approach in MPD[12] and elsewhere will help police to institutionalize a stronger and more precise emphasis on problem places in daily operations, promote the development of more tailored and effective strategies to address these locations, and facilitate more optimal uses of investigative and prevention resources.

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[12] At present, MPD analysts are working to develop support within the agency and among community partners (e.g. city officials) for the shifts in organizational thinking and resources that will be necessary to fully implement the case of place strategy.

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