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Document Title: **Situational Crime Prevention at Specific Locations in Community Context: Place and Neighborhood Effects**

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Document No.: **229364**

Date Received: **January 2010**

Award Number: **2005-IJ-CX-0030**

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Situational Crime Prevention at Specific Locations in Community Context: Place and Neighborhood Effects

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November, 2009

This project was supported by Grant No. 2005-IJ-CX-0030 awarded by the National Institute of Justice, Office of Justice Programs, US Department of Justice. The opinions, findings, and conclusions or recommendations expressed in this publication/program/exhibition are those of the author(s) and do not necessarily reflect the views of the Department of Justice.

Abstract

This final report to the National Institute of Justice describes the methods, data, findings and implications of a study of the situational and contextual influences on violence in bars and apartment. The study was conducted in Cincinnati, Ohio. Interviews of managers and observations of sites were made for 199 bars. For apartment complexes owners were interviewed for 307 and observations were made at 994. Using the data from these sources, police records, county land parcel data, and census information, the study examined why some bars and apartments had more violent crime than others. For both types of places, violent crime is highly skewed: a few places have most of the violent incidents but most bars and most apartment complexes have no violence or very little violence. In both bars and apartment complexes, neighborhood context seems to be loosely coupled with violence. Bars were clustered in a few neighborhoods, but violent and non-violent bars were near each other. Neighborhood context influenced the relationship between situational variables and violence in apartment complexes, but not consistently. Place specific features are also important. In bars, minimum drink price and whether the bar was attracting the ideal customer were negatively associated with violence while security was positively associated with violence. In apartment complexes a host of site specific features and management practices were associated with violence, including location, physical characteristics, incivilities, and management practices. These associations sometimes depended on neighborhood disadvantage or violence. To account for these findings, the report describes a hypothetical general model of place management. The report concludes with policy and research implications.

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Executive Summary

Crime is concentrated at places (Eck, Clarke, and Guerette, 2007; Eck and Weisburd, 1995; Farrell, 1995; Sherman, Gartin, and Buerger, 1989; Spelman, 1995). One of the major reasons for this concentration are the actions of people who own places; place managers. Though place management has been empirically documented (Eck, 1994; Homel and Clark, 1994; Mazerolle, Kadleck, and Roehl, 1998), little is known about how place managers regulate specific environments. Even less is known about the contexts that could influence place management or could facilitate or constrain managers' efforts.

This research project was designed to fill these gaps in our knowledge and help build more effective crime prevention practice. It examines two types of places, apartment complexes and drinking establishments (e.g., bars and restaurant /bars). The research had two goals:

1. Develop information useful to police and others engaged in place-based situational crime prevention that can assist them in working with place managers to reduce violent crime.
2. Improve the scientific understanding of how place managers influence crime at places, and the factors that influence place management practices.

To accomplish these goals the following objectives will be achieved:

1. Identify apartments and alcohol drinking establishments (includes bars and restaurants with alcohol service licenses) in Cincinnati that have very high numbers of violent incidents and very low numbers of violent incidents;
2. Document the management practices and site characteristics of both high and low violent incident sites;
3. Determine the neighborhood contexts of high and low crime establishments;

4. Examine how the management practices, site characteristics and neighborhood context influence crime and each other.

This study took place in Cincinnati, a city of 331,285 people in 2000, located on 79.6 square miles in southwestern Ohio. Fifty-two neighborhoods are located within the city. Neighborhood populations average 6,525 people and range from 395 to 31,053. These provide a variety of context that may influence place management and violent crime in bars and apartments.

A similar, but not identical, data gathering process was used for bars and apartment complexes. Table 1 summarizes the data collection, analysis, and basic findings from the study.

First, the type of place was defined in a way that allowed comparisons of very similar places. The definitions are listed in Table 1.

Second, the researchers used the Hamilton County Auditor's data on land parcels to identify locations that could fit these definitions and were within the city limits of Cincinnati. The Auditor's records provided the address of the location, basic characteristics of the parcel, information on who owned the location, and a use classification. The use classification provided a first cut at determining which locations should be studied.

Third, these data were then analyzed to establish a population of sites that closely fit this definition. Potential bars were compared to lists of bars in an annual bar guide. Where there was doubt, site visits or phone calls were made to establish a fit to the definition. This also allowed elimination of places that were formerly bars but had closed. Apartment sites were clustered and contiguous sites owned by the same person or company were aggregated to a "complex". Because of the number of apartment complexes, verification visits were impractical.

Consequently, closed apartment complexes or complexes that had been misclassified in the Auditor's records could only be established after onsite data collection.

Fourth, crime and call for service data from the Cincinnati Police Department were analyzed and crimes with the same addresses as the sites were assigned to them. This provided a statistical description of the frequency of violent crime across all bars and apartment complexes.

Fifth, the spatial distributions of bars and apartment complexes were examined. Bars were tightly clustered in a few neighborhoods and most neighborhoods had no bars or too few to use formal contextual analysis. Apartment complexes were widely spread throughout the city, though a few very small neighborhoods had too few complexes for analysis. These small neighborhoods were grouped with adjacent similar neighborhoods. One very large complex, which constituted a neighborhood in and of itself, was dropped from the study.

Sixth, locations were sampled for further data collection. All bars within Cincinnati that fit the definition were examined because it was practical to do so. A different approach was used for apartment complexes. To ensure that neighborhoods would have sufficient complexes for hierarchical modeling, we randomly sampled complexes by neighborhood. Further, if several complexes were controlled by the same owner, we only selected one of the owner's complexes.

Seventh, trained graduate students visited the sampled bars and complexes to carry out observations of each site's physical characteristics. They were deployed in teams of two, with one student focusing on observations while the other conducted the interviews. The site teams were able to achieve a response rate of about 83 percent for bars. A completion rate of 69 percent was achieved for observing apartment complexes (see Table 1).

Eighth, attempts were made to interview a place manager. A place manager was defined as the owner or an employee of the owner who has control over the site. So in bars managers

included the owner, bartenders, wait staff and bouncers. Interviews with bar managers occurred at the same time as the observations. At least three attempts were made to interview a manager and observe the site.

Apartment managers included owners, management company representatives, or on site staff. Because apartment complex managers are seldom on site, the observations were undertaken separately from the interviews. Several methods of gathering management data were used. First a mail survey was used with a follow-up mailing to improve the response rate. This was followed by phone calls to owners of apartments in neighborhoods with insufficient completed interviews. The interview response rate finally achieved was 21 percent.

Table 1: Summary of methods and findings

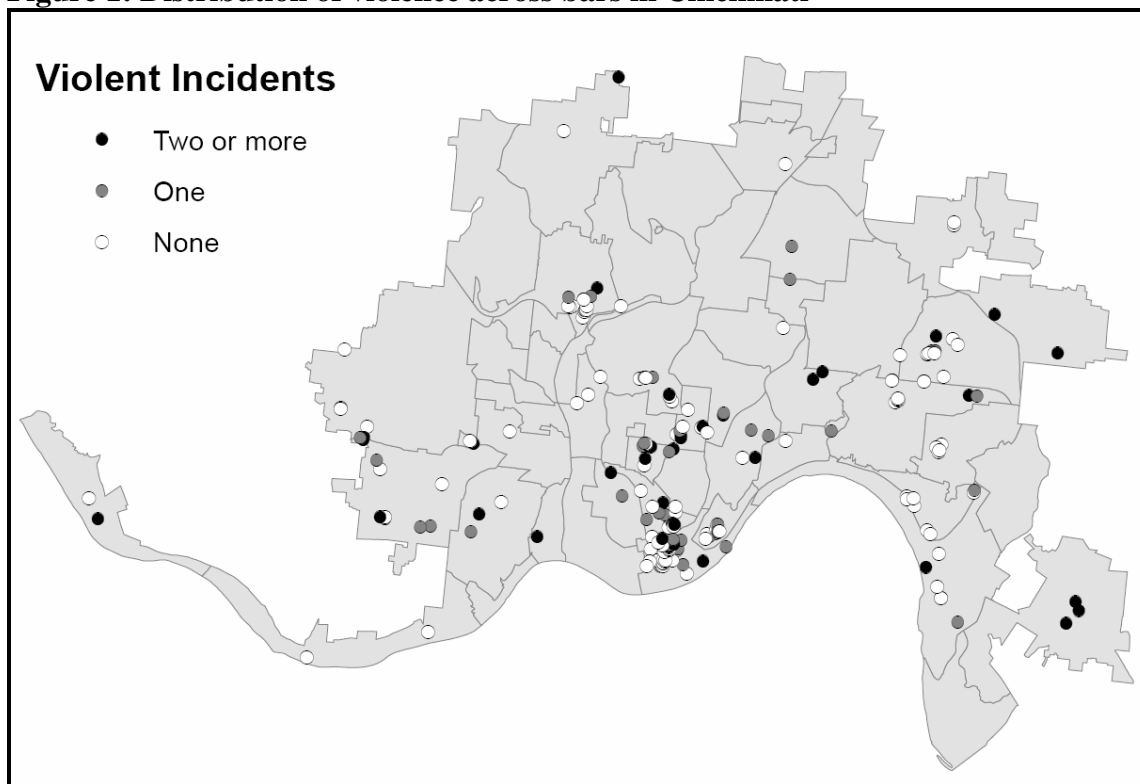
	Bars	Apartment Complexes
Definition	A place that meets four conditions: (1) it is open to the general public; (2) it serves hard alcohol for on-site consumption; (3) some proportion of patrons frequent the place for the primary purpose of consuming alcohol; and (4) there is a designated physical area within the place that serves as a drinking area.	An apartment complex is a grouping of physically contiguous apartment land parcels owned by the same person or entity. An apartment land parcel is a residential structures with four or more units, as classified by the Hamilton County Auditor in accordance with the Ohio Revised Code.
Data to locate site and identify owner	Hamilton County Auditor records	Hamilton County Auditor records
Violent crime data	Cincinnati Police Department records of calls for service and reported crimes. Reports of place managers interviewed.	Cincinnati Police Department records of calls for service and reported crimes.
Population	239	4,956
Target Sample Size	239	1,451 distributed among neighborhoods and having no duplicate owners
Obtained interview sample (response rate)	199 (83.26%)	307 (21.15%)
Obtained observation sample (response rate)	199 (83.26%)	994 (95.6%)
Contextual data		U.S. Census
Method for estimating context	Examining the spatial distribution of bars with different levels of violence	Hierarchical linear modeling
Findings regarding neighborhood	Bars cluster in particular neighborhoods. Violent and non-violent bars are found together in the same areas.	Context had variable influences and depended on the types of situational variables being examined.
Situational variables associated with violence (-) negative association (+) positive association	Cost of least expensive drink (-) Attracting ideal customer (-) Security (+)	Corner lot (+) Bus stops (+) Loitering (+) Delinquent rent (+) Section 8 (+) Owns other apt complexes (+) On-site office (+) Background checks (+) Evictions (+) High traffic streets (+) matters only in disadvantaged neighborhoods Minor disorder (+) less important in disadvantaged or violent neighborhoods Signage (+) more important in disadvantaged neighborhoods

BARS FINDINGS

As discovered in the analysis used to plan data collection, bars are highly concentrated in Cincinnati. Most neighborhoods have no or few bars, and a few neighborhoods have many. Even within neighborhoods that contained bars, the bars tend to be tightly clustered instead of scattered throughout the neighborhood. For these reasons the influence of neighborhood context on bar violence had to be inferred from spatial analysis, rather than directly estimated from the data.

Figure 1 shows the spatial distribution of bars by their level of violence. The spatial clustering of bars is readily apparent, with the highest concentrations in the downtown and Over-the-Rhine neighborhoods at the bottom center of the map. If neighborhoods had a strong and overriding influence on bar violence, then we should see violent bars located in clusters separate from clusters of non-violent bars. There is very little of such segregation. Rather, the overall pattern is that the relatively few violent bars are located near and among the more numerous non/low-violent bars. Neighborhoods clearly influence where bars will be located, but it is uncertain what other influence they have. We can be reasonably confident that other factors, probably place-based situational factors, must play a role in violence.

Figure 1: Distribution of violence across bars in Cincinnati



A number of place based characteristics were examined. The details are explained in the full report. Here we will focus on the conclusions based on multivariate analysis.

All three of the significant variables that consistently showed a relationship to bar violence were management variables. That is, these are indicators of things the manager has some control over.

Cost of the least expensive drink. During the interviews, the site teams asked the manager the cost of the least expensive drink. The price of the least expensive drink gives an indication of how much someone must spend, and could influence the amount of drinking an individual can undertake. As the cost of the least expensive drink rises, violence declines. In short, more expensive bars have less violence.

Attracting the ideal customer. The site team also asked the manager if the bar was attracting the type of customer that was hoped for. The interviewer left the definition of “ideal”

to the manager, so each manager could have a different ideal customer in mind. Bars where ideal customers were being attracted had less violence than bars where this was not the case. This suggests that, on average, managers of bars do not seek to attract violent customers. Instead, some bars may put up with violence as a way of getting by with less than ideal customers.

Security. A security index was constructed to measure the number of different types of security features used by management to prevent crime. The security index ranges from 0 to 7 and represents a count of whether the bar has a burglary alarm, a robbery alarm, access codes, cash control procedures, established staff behavioral expectations, weapons for staff, or surveillance cameras. On average, bars in Cincinnati used three of these security measures to prevent crime. This index was positively associated with violence. That is, bars with higher security index scores had more violence than bars with low scores. There is a straightforward interpretation of this: Bar managers are responding to violence by increasing security (i.e., violence causes security). Security may keep the violence from getting worse, but it does not appear to make a bad bar safe. Though this makes more sense than hypothesizing that security causes violence, it too is a hypothesis in need of testing.

APARTMENT COMPLEX FINDINGS

The analyses of the apartment data indicated that management decisions are important in understanding violence at apartment complexes. Several types of management decisions appear important. Table 1 summarizes the findings from multivariate analysis in which place level and neighborhood context variables were examined. We will highlight some of the most salient findings here.

First, our analysis provided evidence that purchasing decisions of owners regarding physical characteristics of properties can have implications for violence. In particular, our findings highlight a couple of key risk factors in this regard:

- Apartment complexes located on corner lots were more violence-prone places; and
- Apartment complexes located near bus stops were more violence-prone places.

Second, some management decisions regarding the upkeep, maintenance, and supervision of their properties may be key in predicting levels of violence on the properties. Our findings highlighted one specific finding consistent with this idea:

- Apartment complexes with presence of loitering were more violence-prone places.

Finally, management decisions regarding the financial standing of tenants to whom they rent appear important in understanding and preventing violence. In particular, our findings indicate the following:

- The proportion of tenants delinquent on their rent is positively associated with apartment violence; and
- The proportion of tenants paying with Section 8 vouchers is positively associated with apartment violence.
- There is also evidence that these management decisions do not have the same impact across all neighborhood contexts. That is, in some cases management decisions in one neighborhood may produce different outcomes than the same decision in another neighborhood. Our contextual analysis, including exploration

of how complex-level effects on violence varied according to neighborhood context yielded the following conclusions:

- There is evidence that apartment complexes located on high-traffic streets (as indicated by presence of a street light) are only at risk of violence in neighborhoods with the most concentrated disadvantage.
- Incivilities were most harmful to complexes located in neighborhoods with less disadvantage and less overall crime. That is, incivilities at an apartment complex in a neighborhood with high poverty and high crime will cause less violence than the same incivilities at a complex in a higher income neighborhood with less crime.

GENERAL FINDINGS

Four general findings from this study may have broad implication for the relationships among places, neighborhoods, and violence.

1) Violence is highly concentrated in a few bars and a few apartment complexes. This is highly consistent with research on places. This suggests that attention should be focused on the relatively rare high violence places, rather than on all places (e.g., all bars or all apartments).

2) Place violence is partially determined by neighborhood context. Context is neither the dominate influence nor is context irrelevant. Place violence is both the result of place characteristics and the neighborhood context of the place. This suggests that the effectiveness of place specific interventions may be different in different neighborhood contexts.

3) Place features are associated with place violence. In particular, we found evidence consistent with the hypothesis that place management influences violence at both apartments and bars.

4) Place management may be a dynamic process involving constant adjustments over time to capitalize on useful features of the context and insulate the place from negative features. Neighborhood influence may be most important when managers are making long term decisions, such as where to locate a bar or apartment complex or if they should purchase an existing facility. For very short term decisions involving day-to-day management places can be relatively insulated from neighborhood contexts. Intermediate term management decisions buffer the place from the context. A more detailed description of a dynamic model of place management is contained in the full report.

Place Research Implications

This study provides several insights into how research into places and place management should be conducted.

Interviewing and Observing Place Managers. The accessibility of place managers to researchers varies considerably. In this study, bar managers were very accessible but apartment managers were not. This resulted in very different strategies for gaining access, and ultimately influenced the response rates. Though this study restricted itself to interviews of management and observations of static physical conditions, it has implications for management observations. The ability to observe place management in action also varies across different types of places. A researcher can sit in a bar and directly observe how managers behave. Though some of their actions will be in private locations, much will be in the open. Even if a researcher has unfettered access to an apartment complex, however, they will see very little management behavior. Interactions with tenants can take place over the phone (or through other devices) and long periods will elapse without any obvious action by the owner or her designee. The broad lesson is that the pace of activities within places will make place management easier or harder to study.

Places that host a limited range of activities, such as office buildings, parking garages, and apartment complexes are likely to have less management presence to observe, compared to places with more diverse and less predictable activities, such as stores, casinos, and schools.

Case Studies and Establishing Temporal Order

The findings regarding security in apartments and bars illustrates the difficulty of establishing temporal order from cross-sectional studies. We hypothesize that violence increases security (not that security causes violence), but cannot test this without observing places over time. To understand the impact of place management on crime, and the influence of neighborhood context on place management, places should be observed over time. We would expect to see managers shifting management practices to achieve their objectives, address changes in their context, and to address unforeseen opportunities and impediments. Observing places over time will require observing fewer places: instead of observing many places at one time, researchers should consider observing few places for many time periods.

Management Practice and Business Networks

Understanding the influence of place management on crime may be improved by drawing on studies of businesses and marketing. Industry standards could serve as benchmarks for measuring management practices. This is a virtually untapped area that deserves greater attention. Business networks are also important for understanding how places are managed. Three types of networks appear important. First, places may be networked by virtue of sharing the same owner. In Cincinnati, about eight percent of the apartment building owners own about half of the apartment buildings. Second, places may be connected by franchises. This is more readily seen in the fast food, clothing, and convenience store industries than in bars and apartments. Third, business groups link places through their owners. So even places not part of

a franchise and not sharing an owner may have connections to other places that can influence how management is practiced. All three of these networks can operate outside of neighborhoods, and provide an unexamined context of place management.

Place-based prevention

There are seven implications for policy that stem from this study's findings.

1. Place-based crime policies should focus on extreme places, not average places.

Rather than broad policies that apply to all facilities of a particular type, the governments should direct their anti-crime policies to the small number of high crime locations in the group.

Separating the many normally good places from the few routinely bad places has three advantages. First, focused policies are more effective. Second, it is more efficient, as the same resources can be concentrated where they can do the most good, or fewer resources can be used to have the same impact. Third, it can be more politically attractive to policy makers than attending to all places of a particular type.

2. Neighborhood based crime prevention efforts will need to include specific place-based strategies. Neighborhood policies without place strategies may not be able to suppress crime at high crime locations.

3. Place-based prevention efforts may need to be adjusted to account for the place's context. The effectiveness of preventions implemented at places may be influenced by the context of the place.

4. Managers are important for controlling crime at places. Owners should be held accountable for persistent crime problems on their premises. This implication comes not only from the findings that place variables are associated with violence in bars and apartments, but from a large body of research and evaluations.

5. Holding managers accountable for reducing crime may be easier if the neighborhood context is supportive. Though managers may buffer their places from their surroundings, these buffering activities come with a cost. Thus, a high crime place in a low crime area where local residents and other businesses are antagonistic to the place's crime facilitation will be easier to improve than the same place in a high crime neighborhood where residents and businesses may view the place's crime facilitation as normal.

6. Place based efforts will be most effective when they take into account the economic and political context of places. This implication is an extension of the previous implication. It also extends the notion of context. We do not know if which context is most important – neighborhood, political, economic, or social – and this requires more research. However, we need to realize that place managers operate in multiple contexts.

7. Regulations that specify specific situational crime prevention practices may be far less effective than regulations that mandate a maximum level of crime. This implications follows from two empirical findings from bars and apartments. First, we found few situational factors that were strongly negatively related to crime. Second, the positive relationship between security and crime suggests the security follows crime. Consequently, it makes more sense to give managers a crime ceiling which they can seek to achieve through what ever legal means they can afford and make sense in the context they are operating. In short, property owners should be given incentives to reduce crime, but not required to achieve specific situational standards.

Introduction

Purpose, Goals And Objectives

The concentration of crime in small areas and specific places provides a host of crime prevention opportunities. Situational crime prevention (Clarke, 1995) at these crime hot spots has been successfully demonstrated (Eck, 2002). The agents principally responsible for undertaking such actions are the owners and employees of these hot locations. In extended Routine Activity Theory (Felson, 1995), these individuals are described as place managers. Though place management has been empirically documented (Eck, 1994; Homel and Clark, 1994; Mazerolle, Kadleck, and Roehl, 1998), little is known about how place managers regulate specific environments. Even less is known about the contexts that could influence place management or could facilitate or constrain managers' efforts.

The research described here was designed to fill these gaps in our knowledge and help build more effective crime prevention practice. It examines two types of places, apartment complexes and drinking establishments (e.g., bars and restaurant /bars). The research had two goals:

- 1) Develop information useful to police and others engaged in place-based situational crime prevention that can assist them in working with place managers to reduce violent crime.
- 2) Improve the scientific understanding of how place managers influence crime at places, and the factors that influence place management practices. To accomplish these goals the following objectives will be achieved:

- a. Identify apartments and alcohol drinking establishments (includes bars and restaurants with alcohol service licenses) in Cincinnati that have very high numbers of violent incidents and very low numbers of violent incidents;
- b. Document the management practices and site characteristics of both high and low violent incident sites;
- c. Determine the neighborhood contexts of high and low crime establishments; and,
- d. Examine how the management practices, site characteristics and neighborhood context influence crime and each other.

Review Of Relevant Research

Hot Spot Places

Considerable research has shown that crime is concentrated in a relatively few places (Eck and Weisburd, 1995; Farrell, 1995; Sherman, Gartin, and Buerger, 1989; Spelman, 1995) and that the application of situational crime prevention at these "hot places" is an effective method for reducing a variety of criminal activity and disorders (Eck, 2002; Poyner, 1993; Welsh and Farrington, 2002; Welsh and Farrington, 2004). In a recent paper, Eck, Clarke, and Guerette (2007) show that: a) when hot places are grouped by type (e.g., bars, apartments, parking lots, hotels, and so forth) a small percent of each type is responsible for a disproportionate amount of crime at each place type; b) this concentration persists with finer subdivisions of place type; c) and this concentration typically persists after controlling for the size of places.

Further, police have become increasingly aware that the way owners of places manage their locations (through their employees) has major influences on whether their places are relatively crime free or whether they are crime hot spots. A recent Washington Post article describes efforts in Prince Georges County (MD) to address hot apartment complexes (Raghavan, 2005). This insight is backed by non-experimental studies (Clarke and Bichler-Robertson, 1998; Eck, 1994; Green, 1995; Homel and Clark, 1994; Mazerolle, Kadleck, and Roehl, 1998; Weisburd, Bushway, Lum, and Yang, 2004), quasi-experiments (Felson, Berends, Richardson, and Veno, 1997; Homel, Hauritz, Wortley, McIlwain, and Carvolth, 1997b; Mazerolle, Ready, Terrill, and Waring, 2000; Putnam, Rockett, and Campbell, 1993), and randomized experiments (Eck and Wartell, 1998; Hope, 1994; Mazerolle, Ready, Terrill, and Waring, 2000; Mazerolle, Roehl, and Kadleck, 1998). Importantly, as one becomes more location specific, hot spots persist. The link between place management and crime prevention is further strengthened by the fact that virtually all place-based situational prevention efforts must be implemented with at least the consent of place managers, if not their active involvement. Today, one of the very first questions police officials ask when addressing problem locations is, "who owns it?" (Goldstein, 1997; Sampson, 2003)

Place Management

Problem ownership (Goldstein, 1997; Laycock, 2004; Sampson, 2003) is an outgrowth of a facet of routine activity theory known as place management (Eck and Weisburd, 1995). Place management refers to the regulation of conduct, organization of work, and design of space by owners and their employees to facilitate the operations of the place. Regulation of conduct - by procedures, rules, or physical design - can inhibit or facilitate crime. With regard to apartment complexes, for example, this includes lease provisions, other rules of conduct and enforcement,

the use of background checks for prospective tenants, and security provisions at the complex.

With regard to alcohol drinking establishments, for example, place management includes rules of conduct and enforcement, the manner in which alcohol is served, the employment of bouncers, how food service and entertainment are provided, and the physical layout. Some place management is used with the intent to prevent crime, though more often crime prevention is a by-product. Lack of place management contributes to crime (Eck and Weisburd, 1995; Felson, 1995).

Though the idea was coined a decade ago, we know little about how place management and neighborhood context interact in the formation of violent places, or the creation of safe places. So although place management has been widely applied by police, we do not know if there are different approaches to place management suitable to different communities.

Additionally, we do not know how place management and neighborhood context interact to form crime place hot spots.

Context of Places

The macro-level criminological literature provides ample evidence that community characteristics do matter in understanding the spatial patterning of crime. Ecological studies suggest that both social and physical characteristics of a community affect crime events by altering the administration of resident-based social control. Research in the social disorganization tradition shows that community characteristics such as concentrated disadvantage and residential mobility diminish cohesiveness among neighbors thereby affecting their supervision and intervention behavior (Bellair, 2000; Benson, Fox, DeMaris, and Wyk, 2003; Bursik, 1988; Bursik and Grasmick, 1993; Morenoff, Sampson, and Raudenbush, 2001; Sampson and Groves, 1990; Sampson, Raudenbush, and Earls, 1997; Warner and Rountree, 1997; Wilcox, Rountree

and Warner, 1999). Other research emphasizes the role of the physical environment in informal social control, suggesting that facets of community space such as street layout, building design, lighting, physical decay, and boundary markers can affect indicators of informal area-level crime control including territoriality and natural surveillance (Donnelly and Kimble, 1997; Fisher and Nasar, 1995; Kurtz, Koons, and Taylor, 1998; Nasar and Fisher, 1993; Newman, 1973; Newman, 1995; Newman, 1996; Taylor, 2001; Taylor, 1987; Taylor, 1988; Taylor and Brower, 1985; Taylor, Gottfredson, and Brower, 1981; Taylor, Gottfredson, and Brower, 1984; White, 1990; Wilcox, Quisenberry, Cabrera, and Jones, 2004).

Other research emphasizes how micro-ecological and macro-ecological characteristics may combine or interact to produce crime opportunities at multiple levels (Benson, Fox, DeMaris, and Wyk, 2003; Benson, Wooldredge, Thistlethwaite, and Fox, 2004; Fisher, Sloan, Cullen, and Lu, 1998; Van Wyk, Benson, Fox, and Demaris, 2003; Wilcox, Land, and Hunt, 2003; Wilcox, Quisenberry, and Jones, 2003). Most relevant to this research, multilevel research has underscored the potential for the criminogenic nature of places to be neighborhood-specific. The effects of businesses, for instance, have been shown to have differential effects on neighborhood crime, depending upon the level of disadvantage characterizing the broader community context (Wilcox, Quisenberry, Cabrera, and Jones, 2004).

Other findings imply similar sorts of place-neighborhood interaction. For instance, research shows that crime-place hot spots are geographically clustered (Eck, Gersh, and Taylor, 2000; Sherman, Gartin, and Buerger, 1989), and recent evidence suggests that the stability of crime hotspot places may vary by neighborhood (Weisburd, Bushway, Lum, and Yang, 2004). Finally, it has been proposed that place management may be influenced by neighborhood

economic conditions (Eck and Wartell, 1998), though there is no research testing this proposition or otherwise showing how neighborhood context influences place management practices.

In sum, several recent studies suggest that place-specific factors, including place management, and neighborhood-level physical and social factors may work together in producing spatially concentrated patterns of violent events. These factors may work together in several different ways, including, 1) simultaneous main effects of place and neighborhood context (e.g., apartment lease provisions and neighborhood poverty might both contribute to violence in apartments), 2) indirect effects of neighborhood context through place management (e.g., neighborhood income might influence the types of leases landlords use, which in turn influences violence on their property), and 3) moderating effects of neighborhood context whereby community characteristics condition the effects of place management on violence (e.g., the same lease provisions in high and low income neighborhoods have different effects on apartment complex violent crime). Despite the suggestion that such effects might exist, the research is far from conclusive in this regard.

Cincinnati Apartments and Drinking Places

The research focuses on two specific place types: rental apartment complexes and alcohol drinking establishments. These two types of facilities were selected because: they are common; they can be sites of violence; there is research indicating management plays a role in the frequency of violence; and they provide a useful contrast between residential and recreational locations. With regard to private apartment complexes, most of this research has involved experimental interventions to test whether interventions with owners can reduce crime (Clarke and Bichler-Robertson, 1998; Eck and Spelman, 1987; Eck and Wartell, 1998; Green, 1995; Hope, 1994; Mazerolle, Kadleck, and Roehl, 1998; Mazerolle and Roehl, 1999; Mazerolle,

Ready, Terrill, and Waring, 2000; Poyner, 1994; Poyner and Webb, 1991). The precise management practices that contributed to the concentration of crime in a few apartment complexes is not well documented, though lease provisions and willingness to evict problem tenants are implicated in some studies (Clarke and Bichler-Robertson, 1998; Eck, 1994; Sorensen, 1998).

Bars too are closely associated with crime. Dennis Roncek's work points to the potential criminogenic effect bars have on the immediate surrounding area (Roncek and Bell, 1981; Roncek and Maier, 1991; Roncek and Pravatiner, 1989). Other studies show that the way bars are managed - particularly drink service policies and how bouncers and security staff are trained and supervised -- can have a profound influence on crime and disorder in drinking establishments and surrounding spaces (Felson, Berends, Richardson, and Veno, 1997; Homel and Clark, 1994; Homel, Hauritz, McIlwain, Wortley, and Carvolth, 1997a; Homel et al., 1997b; Putnam, Rockett, and Campbell, 1993).

Drinking places and apartment complexes, consequently, are ideal for exploring the influences of place management and environmental context - there is a strong theoretical and empirical link between crime and both place types, yet in both circumstances, as noted above, there is evidence that only a small proportion of each place type are associated with a large proportion of crime at each place type.

Displacement and Diffusion

If crime in the worst of these locations can be lowered substantially, then overall crime will decline. As there are relatively few such locations, in principle prevention efforts can be concentrated rather than spread across many locations with little or no crime. So targeting these risky facilities (Eck, Clarke, and Guerette, 2007) can be both effective and efficient. The benefits

of this approach depend, in part, on whether crime would displace from the hot locations to formerly cool locations. Theory and evidence suggests that crime is unlikely to fully displace (Barr and Pease, 1990; Cornish and Clarke, 1986; Eck, 1993; Hesseling, 1994). Displacement theory suggests that because offenders are reasonably rational, the effort to learn about, move to and adapt to new locations will limit displacement (Barnes, 1995; Bouloukos and Farrell, 1997; Cornish and Clarke, 1987; Eck, 1993).

If the proposed study finds strong place management effects and strong contextual effects, these will imply diffusion is more likely than displacement. However, if high crime and low crime places (drinking places or apartments) are indistinguishable regarding place management then the possibility of displacement increases. And if context has little impact as well, then displacement could be over a larger area than if context has a strong influence. So this study has implications for displacement and diffusion, even though they are not the direct subjects of study.

Cincinnati Neighborhoods

With a population of 331,285 in 2000, Cincinnati is the third largest city in Ohio. Located on 79.6 square miles in southwestern Ohio and bordered on the south by the Ohio River, it is the county seat for Hamilton County. Just over half (53%) of Cincinnati's residents are white, with African Americans comprising the largest minority group in the city at 42.9% of the population. The median family income in 1999 was \$19,962. There are 48,375 single-family owner-occupied homes in Cincinnati with a median value of \$93,000.

Fifty-two neighborhoods are located within the city. There is a sense of neighborhood pride among the locals. When asked where they live, city residents naturally refer to the name of their neighborhood. These neighborhoods are mapped in Figure 2 below.

Cincinnati neighborhoods vary substantially in area, population, and a number of Census measures, making the city suitable for investigations of neighborhood-level effects on crime and place management. Neighborhood population ranges from 395 to 31,053 (mean=6,524.73, s.d.=5,610.55). Neighborhood area ranges from 0.071 square miles to 5.724 square miles (mean=1.53, s.d.=1.15). The number of violent calls for police service also varies substantially from neighborhood to neighborhood, from 46 to 3,946 (mean=858.94, s.d.=831.46).

Table 2 contains data from the 2000 Census aggregated to neighborhood level¹ as well as the number of apartment complexes that exist within each neighborhood.

¹ Census aggregates (blocks, block groups, and tracts) do not correspond with Cincinnati neighborhood boundaries. We aggregated data from Census aggregates to Cincinnati neighborhoods using ArcView 9.2. Data from the smallest Census aggregate available were summed to create neighborhood-level Census measures. This process attributed a Census aggregate to a neighborhood when the centroid of the Census aggregate fell inside of the neighborhood.

Figure 2: Cincinnati Neighborhoods

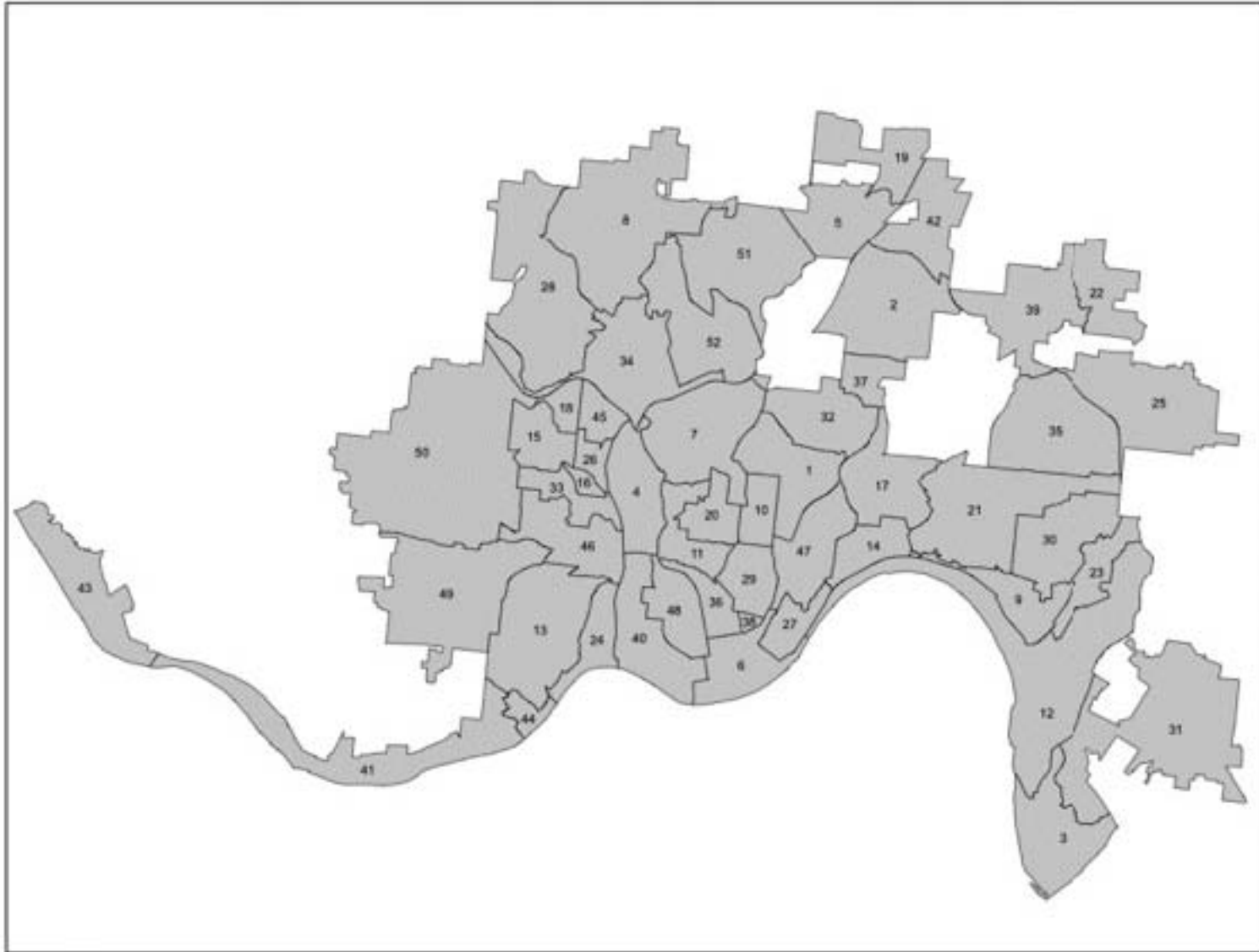


Table 2: Cincinnati Neighborhoods

<i>Number</i>	<i>Neighborhood</i>	<i>Area (sq mi)</i>	<i>2000 Population</i>	<i>Number of Households</i>	<i>Violent Calls For Service</i>	<i>Violent Call Rate Per Person</i>	<i># Apartment Complexes</i>
1	Avondale	1.40	10,732	4,476	2,540	0.24	225
2	Bond Hill	2.30	10,127	4,359	1,045	0.10	187
3	California	1.63	395	157	46	0.12	1
4	Camp Washington	1.22	1,506	502	359	0.24	20
5	Carthage	1.31	2,495	1,095	379	0.15	19
6	CBD/Riverfront	1.07	3,809	1,905	1,853	0.49	20
7	Clifton	2.12	9,118	4,800	767	0.08	211
8	College Hill	3.69	14,950	6,664	1,204	0.08	130
9	Columbia Tusculum	0.87	2,011	943	215	0.11	22
10	Corryville	0.52	3,781	1,808	994	0.26	93
11	Fairview	0.77	9,803	4,924	710	0.07	102
12	East End	4.06	1,249	512	240	0.19	11
13	East Price Hill	2.37	14,562	5,614	2,395	0.16	172
14	East Walnut Hills	0.71	3,936	2,137	406	0.10	56
15	East Westwood	0.76	3,766	1,683	339	0.09	42
16	English Woods	0.14	1,286	514	254	0.20	0
17	Evanston	1.38	11,009	3,688	1,149	0.10	97
18	Fay Apartments	0.32	2,359	854	487	0.21	7
19	Hartwell	1.17	5,022	2,519	466	0.09	55
20	University Heights	0.63	5,205	1,431	-	-	96
21	Hyde Park	2.74	12,452	6,484	432	0.03	180
22	Kennedy Heights	1.01	5,276	2,393	514	0.10	100
23	Linwood	0.74	932	399	115	0.12	7
24	Lower Price Hill	0.69	1,301	439	472	0.36	35
25	Madisonville	2.39	10,774	4,660	1,190	0.11	103
26	Millvale	0.29	2,856	1,049	437	0.15	2
27	Mount Adams	0.53	1,631	1,071	102	0.06	34
28	Mount Airy	3.24	9,603	3,995	1,132	0.12	110
29	Mount Auburn	0.72	6,790	2,833	1,048	0.15	156
30	Mount Lookout	1.55	6,362	2,958	127	0.02	89

<i>Number</i>	<i>Neighborhood</i>	<i>Area (sq mi)</i>	<i>2000 Population</i>	<i>Number of Households</i>	<i>Violent Calls For Service</i>	<i>Violent Call Rate Per Person</i>	<i># Apartment Complexes</i>
31	Mount Washington	3.83	11,736	5,931	650	0.06	151
32	North Avondale	1.33	7,990	3,537	963	0.12	161
33	North Fairmount	0.61	7,990	3,537	224	0.03	14
34	Northside	2.15	9,098	3,874	1,502	0.17	87
35	Oakley	2.33	11,082	6,269	679	0.06	153
36	Over-the-Rhine	0.50	6,553	3,124	3,946	0.60	279
37	Paddock Hills	0.51	2,242	1,065	188	0.08	58
38	Pendleton	0.07	1,129	487	343	0.30	43
39	Pleasant Ridge	1.77	8,842	4,250	592	0.07	199
40	Queensgate	1.46	714	165	311	0.44	1
41	Riverside	2.38	2,555	998	139	0.05	20
42	Roselawn	1.29	6,325	3,061	881	0.14	194
43	Sayler Park	1.59	6,325	3,061	236	0.04	38
44	Sedamsville	0.27	456	142	207	0.45	7
45	South Cumminsville	0.43	1,058	374	146	0.14	1
46	South Fairmount	1.32	4,881	1,968	1,053	0.22	75
47	Walnut Hills	1.27	7,907	3,981	1,985	0.25	190
48	West End	0.87	7,435	3,421	1,992	0.27	82
49	West Price Hill	3.14	20,068	8,365	2,150	0.11	213
50	Westwood	5.72	31,053	14,482	3,017	0.10	575
51	Winton Hills	2.38	6,412	2,372	821	0.13	9
52	Winton Place	1.99	2,337	939	364	0.16	12

Bar Methodology

Data Sources

Secondary Data

Crime. Crime data were obtained from the Cincinnati Police Department for crimes reported and documented between January 1, 2005 and December 31, 2006. A two-year reporting period was used since violence is a relatively rare event, and (2) patterns of violence at a single address are difficult to establish within shorter time periods. These data include Part I and Part II crimes documented at the address level. Only documented crimes were included to avoid problems associated with false reports and multiple reports of a single event. The problem of multiple calls for service for a single event is exacerbated in places where people congregate in large groups and many witnesses are likely to observe and respond to a single event.

Violent incidents were divided into two major categories for analysis: (1) physical violence, and (2) threatened violence. The physical violence variable includes all crimes classified as assault, domestic violence, gross sexual imposition, improperly discharging a firearm, kidnapping, murder, rape, sexual battery, or sexual imposition. The threatened violence variable includes all crimes classified as aggravated menacing, ethnic intimidation, criminal endangering, inducing panic, and menacing by stalking. The threatened violence variable contains offenses that would produce a hostile environment where people likely anticipated violence, rather than incidents where physical violence actually occurred. These categorizations were necessary for analysis due to the small number of offenses documented within specific crime categories.

To examine bivariate and multivariate relationships between place manager decisions and bar violence, a third variable – high violence bars – was created. This variable represents all bars with two or more documented incidents of violence.

Fifteen bars are excluded from all analyses based on police crime data for two reasons. First, some bars shared addresses with other businesses and the data did not contain unique identifiers. Second, crimes that occurred at hotels may or may not have occurred at the hotel bars. Therefore, hotel bars are also excluded. This yielded 139 bars with no or one incident violence and 45 high violence bars, or 184 analyzable bars in total.

Bar Locations. Three secondary data sources were used to identify bar locations. Alcohol licensing information for local businesses was obtained from the Division of Liquor Control, which is an office within the Ohio Department of Commerce. Two additional data sources were used to cross-reference the alcohol licensing information: (1) a list of bars reviewed by *CinWeekly* (a weekly tabloid that annually writes reviews of local bars), and (2) bars listed in local yellow pages (www.cincinnatiyellowpages.com).

Primary Data

Bar Manager Survey. Interviews of bar owners, managers, bartenders, and security staff were conducted. These interviews provide detailed information on bar characteristics and management activities. A copy of the place manager survey instrument is presented in Appendix I. The survey is divided into nine sections and contains questions related to: (1) ownership, (2) characteristics of the property, (3) business strategies, access control, security, and transportation, (4) activities and entertainment provided, (5) food and drink served, (6) number of employees and training, (7) number and demographics of patrons, (8) recent enforcement by

outside agencies, and (9) the financial status of the bar. This information was collected in both qualitative and quantitative format.

Bar Site Observation Survey. Physical attributes of the bar were documented based on observations of the interior, exterior, and environment immediately surrounding the location. A copy of the site observation survey instrument is presented in Appendix II. This survey differs from site surveys used in previous bar research. The focus of the instrument is on physical attributes of the property only; it does not contain questions about patron behavior observed in the bar. The survey is divided into four main sections: (1) characteristics of the exterior of the bar and the immediate environment, (2) attributes of the building, (3) characteristics of the bar interior, and (4) cleanliness/disrepair of restrooms.

Sampling Design

Every bar within Cincinnati city limits was included in the sampling frame (for a description of how the study was modified from the original proposed study, see Appendix VI). However, there are many businesses that serve alcohol but are not bars. For example, a small restaurant with four tables may have a license to serve alcohol to customers, but this business would not likely be used by patrons as a bar. For the purpose of this study, a “bar” was defined as a place that meets four conditions: (1) it is open to the general public, rather than restricted to members or rented out as an entertainment spot to private parties; (2) it serves hard alcohol for on-site consumption; (3) some proportion of patrons frequent the place for the primary purpose of consuming alcohol; and (4) there is a designated physical area within the place that serves as a drinking area (this could be the entire place, or a portion of the place). Places without all four conditions were not considered bars.

Initial identification of bars began with the alcohol licensing information. However, as noted previously, many places with alcohol service permits are not “bars.” For example, restaurants without physical “bars,” art galleries, golf courses, athletic clubs, and large concert venues were included in the data obtained from the Division of Liquor Control. Therefore, the type of permit granted, the *CinWeekly* magazine reviews, yellow pages, and researchers’ knowledge of particular places were used to sort the bars from non-bars. For the locations that could not be classified using these methods, phone calls or site observations of the actual locations were made. If any further ambiguity existed, an employee was contacted during a site visit and asked whether or not they considered the place to be a drinking establishment. Those who answered in the negative were excluded.

Of the 1,254 places in Cincinnati with alcohol licenses, 264 were classified as a bar using the above definition. Bars that were not open during the year 2005 were excluded, along with several locations that closed down before data collection efforts began. A total of 239 bars were included in the final sampling frame. This was the population of Cincinnati bars as of May, 2006.

Data Collection Procedures

Place manager interviews and site observations were conducted between July and October of 2006. Letters were mailed to the bars approximately two weeks before attempts were made to contact the manager or owner of each establishment. The letters explained the purpose of the study and informed the bar owner/manager that a researcher from the University of Cincinnati would contact them to set up an interview appointment. Personal contacts following the mailing were made through telephone calls to owners or managers if they could be reached by phone, or were set during visits to the establishments. These visits were conducted by a two-

member “scout” team. If someone who worked at the bar was willing to complete the survey during the initial visit, the interview and site observations were conducted at that time. If not, an appointment was made for another research team to return at an agreed upon date and time. All sites were visited by a scout or research team at least once.

Most interviews were conducted in-person. Only two interviews were conducted over the phone. Three interviews were conducted at an off-site location (e.g., at a local coffee shop). Research teams consisted of one male and one female graduate student. This made the site observations of the restroom characteristics easier and less obtrusive, although exceptions to the male/female pairings were made when researchers of one gender were unavailable. Unless safety was a concern at a particular location (e.g., one or more researchers felt uncomfortable working alone), one researcher conducted the interview while the other walked through the bar and around the exterior of the building to complete the site observation form.

All types of place managers were interviewed, but only one person was interviewed at each bar. At the initial contact, we asked to speak to someone who knew about everyday management practices at the establishment. We were referred to, and subsequently interviewed, owners, managers, bartenders, and security personnel. This method was considered appropriate since the intention of the study was not to explore the activities of different types of place managers, but to understand how management practices differed across bars. A total of 199 bars are represented in the data. This constitutes an 83.26 percent response rate for the population.

Results

The analyses and findings presented in this section systematically explore the following hypotheses.

- Violent crime is unequally distributed across bars.

Concentrations of violent crime incidents across Cincinnati bars are examined. The number of all violent incidents, physical violence incidents, and threatened violence incidents are plotted by bar to determine whether these incidents are randomly or non-randomly distributed across these locations. Non-random distributions suggest that neighborhood or place-specific effects may be responsible for violence in Cincinnati bars. Descriptive statistics for each of the crime variables are examined. Additionally, manager survey data are analyzed to determine the extent and frequency of violent events across bar locations.

- Violent crime is the product of neighborhood level effects.

The influence of neighborhood context on violent crime cannot be assessed using formal multi-level analyses due to high levels of spatial clustering among Cincinnati bars. However, spatial analysis using Geographic Information Systems software provides visual depictions of the spatial distribution of violent and non-violent bars. It is hypothesized that if violence is the product of strong neighborhood effects the analysis would show distinct clustering of violent bars away from non-violent bars. If neighborhood effects are absent or weak the analysis would show a greater degree of randomness in the distribution of violent and non-violent bars. Statistical analyses are also conducted to determine whether bar location or other environmental features are significantly related to violence in these locations.

- Management practices vary across bars.

Unlike other types of facilities where the purpose of the location and the activities expected to take place in the facility are clearly defined (e.g., grocery stores, fast food restaurants, book stores), there is a great deal of variation in the types of services provided, as well as the approach to delivering those services in bars. The purpose, physical characteristics, and permitted activities for any particular bar are the direct consequence of decisions made by

those who own and manage these locations. The degree to which the bars differ among these dimensions, as well as variation in management approach and response to controlling violence through training and the implementation of security measures, is assessed through the manager survey data. Descriptive statistics and qualitative data reveal to what extent management decision-making varies across Cincinnati bars.

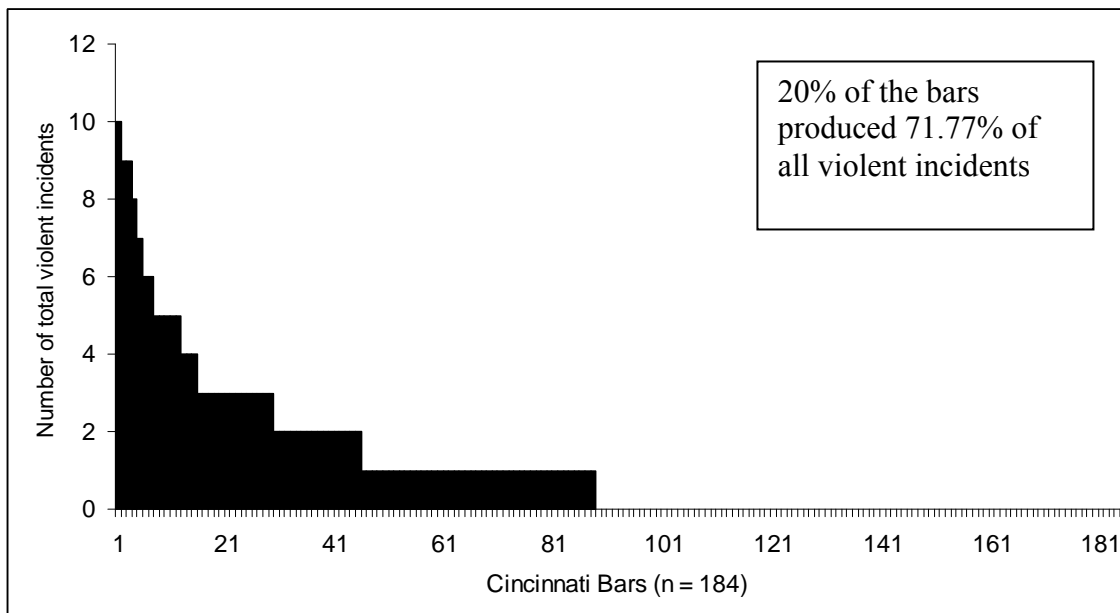
- Differences in management practices are related to varying levels of violence across bars.

Bivariate and multivariate analyses are conducted to determine whether management practices are related to violence in bars. These findings give rise to policy implications for controlling violence in these establishments.

Violence Crime Distributions

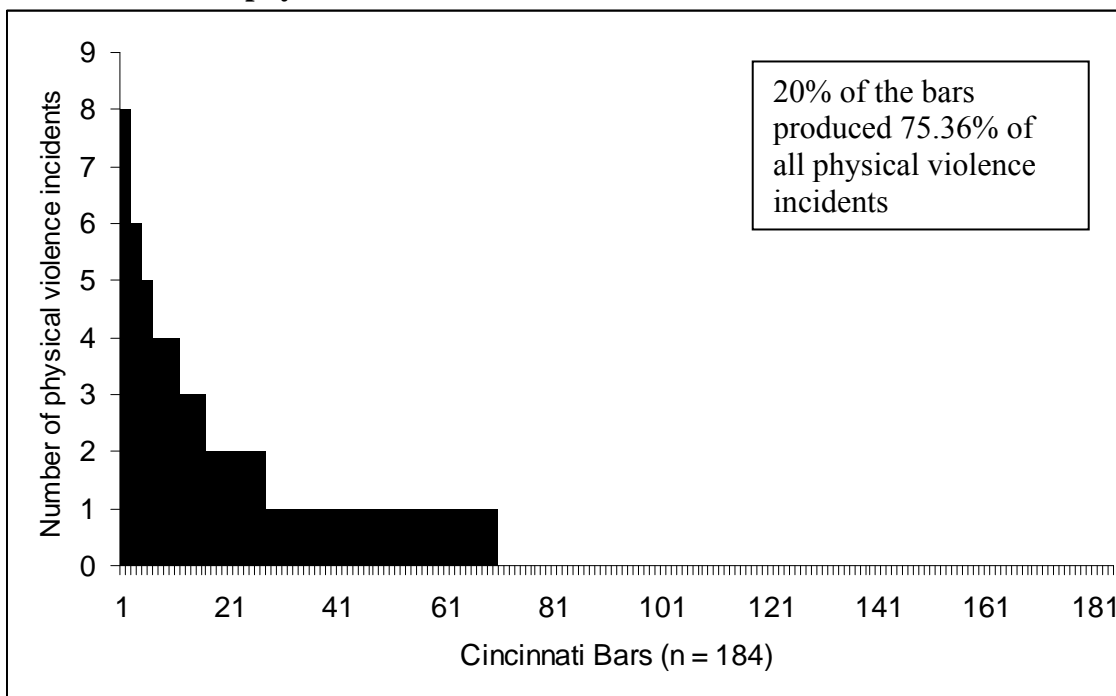
As hypothesized, incidents of violent crime were highly concentrated among the bars. Figure 3 shows the distribution of violent incidents documented by police at Cincinnati bars. Of the 209 incidents of violence documented, almost 72 percent of these occurred at only 38 bars. While 96 bars had no incidents of violence documented over the two-year period, 15 bars had five or more incidents. These 15 bars accounted for over 44 percent of all violent incidents that occurred in Cincinnati bars.

Figure 3: Distribution of violence across Cincinnati Bars



There is an even greater concentration in the distribution of violent crime events across bars when the two subcategories, physical violence and threatened violence, are examined separately. The distribution of incidents of physical violence is presented in Figure 4. There were no incidents of physical violence at 114 bars (62 percent) throughout the two-year period. There was only one physically violent incident at 43 bars (23.4 percent), and only 27 bars (14.6 percent) experienced two or more physically violent incidents.

Figure 4: Distribution of physical violence incidents across Cincinnati Bars



Only 51 drinking establishments (27.7 percent) experienced incidents where violence was threatened on the premises. Figure 5 shows the concentration of threatened violence incidents across all bars over the two-year period.

Figure 5: Distribution of threatened violence incidents across Cincinnati bars

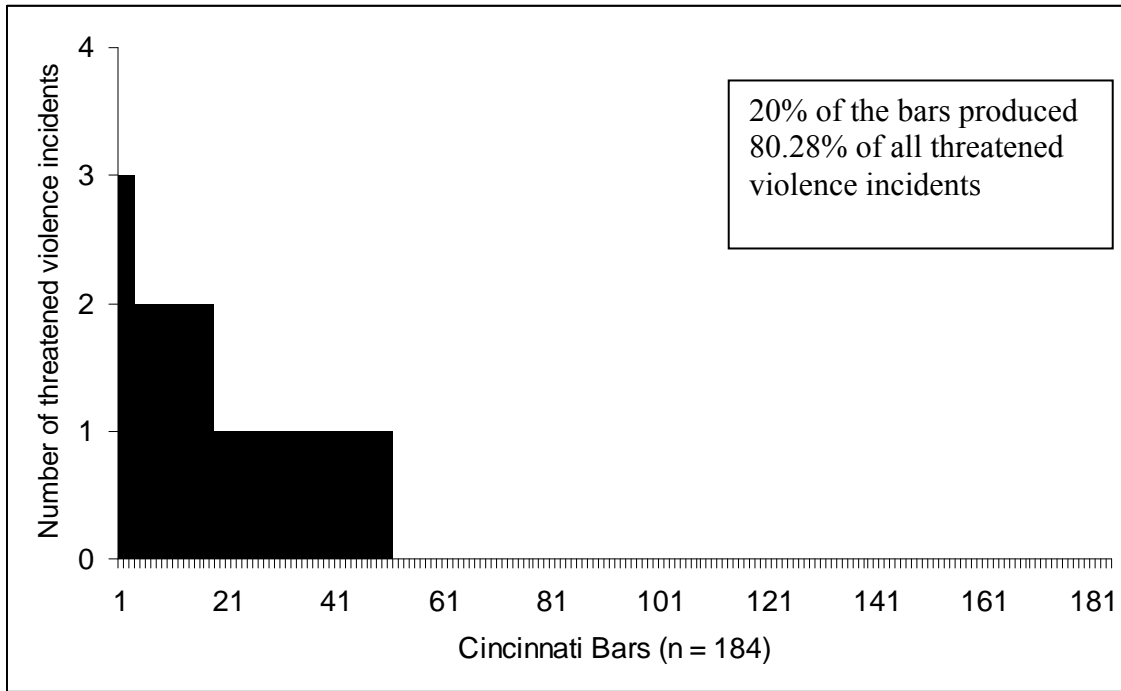


Table 3 provides descriptive statistics for the total violence, physical violence, and threatened violence crime variables. The statistics strengthen support for the hypothesis that violent crime is a relatively rare event concentrated at relatively few bars. The median number of crimes that occurred in the bars was zero for all violent crime categories. Over 52 percent of bars did not have a documented incident of violence over a two-year period.

Table 3: Descriptive statistics for violent crime variables

Crime variables	n	Min	Max	Mean	Median
Total violent incidents	184	0	10	1.13	0.00
Physical violence incidents	184	0	8	0.75	0.00
Threatened violence incidents	184	0	3	0.39	0.00

Admittedly, not all acts of violence are documented by police. However, data obtained from the bar manager surveys support the finding that recurring acts of violence are concentrated

in relatively few bars. Only 16.1 percent (n = 32) of the places surveyed suggested that any type of violence occurred on a regular basis, with 24 managers reporting that fights between patrons had occurred on more than one occasion in the past. The survey data also suggest that when violence occurs, it is still a relatively rare event for most bar managers. Of the 119 managers who could recall the last violent incident that took place in their establishment, 23.5 percent (n = 28) of these incidents reportedly occurred during the month prior to the interview, 37.8 percent (n = 45) occurred within the previous six months, 15.1 percent (n = 18) occurred within the previous twelve months, and 23.5 percent (n = 28) occurred more than a year before the survey. These findings are summarized in Table 4.

Table 4: Manager reports of time since last violent incident

Time lapse (n = 198)	n	%
Within last month	28	14.1
Within last six months	45	22.7
Within last year	18	9.1
Prior to previous year	28	14.1
No violent incident could be recalled	79	39.9

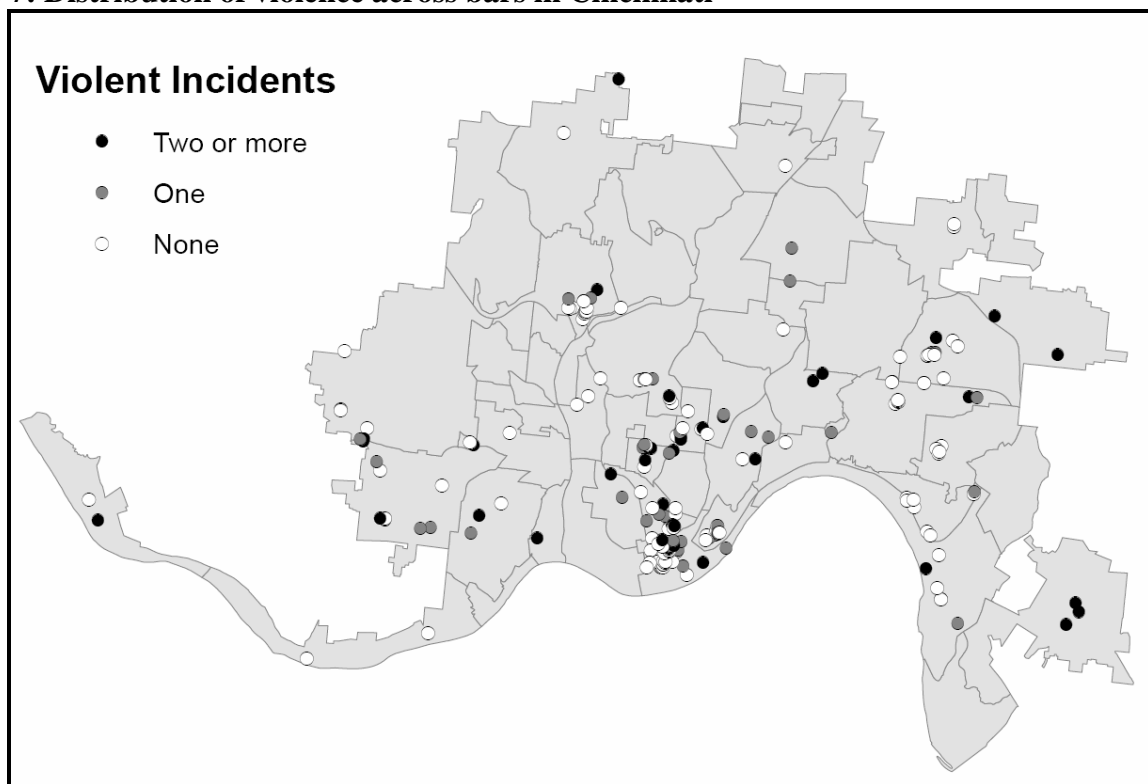
Neighborhood Context

The spatial clustering of Cincinnati bars prohibits formal multi-level analyses (e.g., hierarchical linear modeling) to determine the influence of neighborhood context on violent crime or management practices at these places. Only 23 of the 53 neighborhoods in Cincinnati have bars, and almost 34 percent of these bars are located in only three neighborhoods. There are only six neighborhoods that contain 10 or more bars. Figure 6 depicts the distribution of bars throughout Cincinnati.

that perhaps both neighborhood characteristics and management practices matter. The analyses find more support for the third hypotheses, less for the second, and very little for the first.

Figure 7 shows the distribution of violence across bars in Cincinnati. The white markers represent bars with no documented violence (physical or threatened), the grey markers represent bars with only one documented incident of violence, and the black markers represent bars with two or more documented incidents of violence. The random smattering of violent bars among nonviolent bars fails to support the hypothesis of strong neighborhood effects independent of management effects.

Figure 7: Distribution of violence across bars in Cincinnati



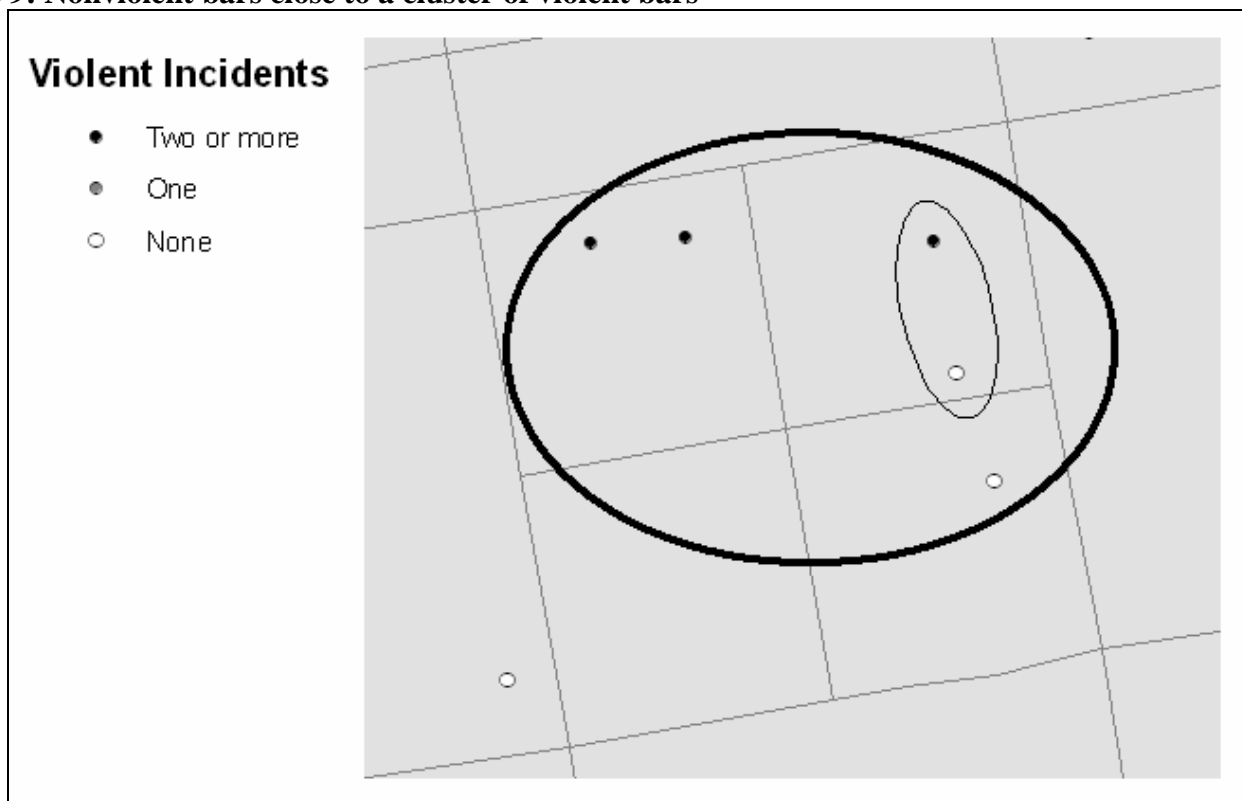
To better illustrate the dispersion of violent bars among nonviolent bars, larger scale maps of bar clusters are presented in Figure 8 and Figure 9. A cluster of six bars within a two-

block radius is depicted in Figure 8; four bars had no violence, one bar had one violent incident, while another bar had three incidents of violence. Figure 9 depicts one of the most dense clusters (n = 3) of violent bars in the city. It also shows that two other bars with no violence located within two blocks. The smaller ellipse in the figure highlights one nonviolent bar on the same blockface as a bar with eight violent incidents. Overall, the spatial analyses do not seem to support the notion that neighborhood characteristics are the most important predictor of violence in bars.

Figure 8: Violent bars among nonviolent bars



Figure 9: Nonviolent bars close to a cluster of violent bars



Previous research on violence in bars has found that bars located in downtown areas of major cities tend to experience more violence than bars located outside these areas (see Graham et al., 1980; Graham, 1985). Downtown districts often draw large numbers of diverse groups of people together who live elsewhere. This creates a high concentration of both targets and potential offenders who generally do not know each other. Thus, downtown districts typically function as “crime generators” and produce high crime rates.

To further test the effect of neighborhood characteristics on violence in bars, Chi-square analyses were conducted to determine whether bars located in Downtown Cincinnati were more likely to experience physical and threatened violence than bars located elsewhere in the city. The

tests revealed no significant effect of Downtown location on the likelihood of experiencing any violence, physical or threatened violence, or two or more violent incidents (see Table 5).²

The neighborhood with the highest crime rate in Cincinnati is not Downtown, but the Over the Rhine neighborhood. Over the Rhine is located just north of the Downtown district and has consistently produced the highest neighborhood crime rates in Cincinnati for over a century. Therefore, additional analyses were conducted to compare the likelihood of violence occurring at bars in this neighborhood compared to all others. Again, no significant differences were found. For the final set of analyses, the Downtown and Over the Rhine bars were grouped together and compared to all other bars. There was no significant difference in the likelihood of violence for bars in these locations when compared to bars in other parts of the city (see Table 5 for the results of these additional analyses).³

Table 5: Chi-square tests of bar location and violence

Variables	n	χ^2	sig	Phi (Φ)	Φ 95% CI
Bar located downtown					
Bar experienced any violence	184	.063	.803	.018	-.126 to .162
Bar experienced physical violence	184	.325	.569	.042	-.103 to .185
Bar experienced threatened violence	184	.079	.779	-.021	-.165 to .124
High violence bar (2 or more incidents)	184	.164	.686	-.030	-.173 to .115
Bar located in Over the Rhine					
Bar experienced any violence	184	1.512	.219	.091	-.054 to .232
Bar experienced physical violence	184	.242	.623	.036	-.109 to .179
Bar experienced threatened violence	184	na ^a	.143	.115	-.030 to .255
High violence bar (2 or more incidents)	184	na ^a	.227	.094	-.051 to .235
Bar located in Over the Rhine or downtown					
Bar experienced any violence	184	1.046	.306	.075	-.070 to .217
Bar experienced physical violence	184	.648	.412	.059	-.086 to .201
Bar experienced threatened violence	184	.630	.427	.059	-.086 to .201
High violence bar (2 or more incidents)	184	.248	.618	.037	-.108 to .180

NOTE: ^aFisher's exact test used since one cell had an expected count of less than 5. df = 1. sig 2-tailed.

² T-tests were also conducted to determine whether the mean number of violent incidents was significantly different for bars located downtown. No significant differences were found.

³ A difference in means comparison also found no significant effect for the Over the Rhine or the Downtown and Over the Rhine location categories.

Other environmental features previously found to be related to crime at places were not significantly related to violence at bars in Cincinnati. Table 6 summarizes violent crime analyses based on (1) whether or not the bar was located on a corner lot, and (2) whether or not the bar was located next to another bar. Groff (1996) found that homes on corner lots experienced more crime incidents; however, no relationship was found between block placement and violent crime at bars. Roncek and colleagues (e.g., Roncek & Bell, 1981; Roncek & Maier, 1991) repeatedly reported significant correlations between the presence of bars and more incidents of crime. The presence of an adjacent bar did not appear to influence whether or not a bar experienced violence in a two-year period.

Table 6: Chi-square tests of environmental features and violence

Variables	n	χ^2	sig	Phi (Φ)	Φ 95% CI
Bar located on corner lot					
Bar experienced any violence	181	.695	.404	-.062	-.205 to .084
Bar experienced physical violence	181	.277	.599	-.039	-.183 to .107
Bar experienced threatened violence	181	.302	.583	-.041	-.185 to .105
High violence bar (2 or more incidents)	181	.872	.350	-.069	-.212 to .077
Bar located adjacent to another bar					
Bar experienced any violence	184	.044	.834	-.015	-.159 to .129
Bar experienced physical violence	184	.260	.610	-.038	-.181 to .107
Bar experienced threatened violence	184	.529	.467	.054	-.091 to .197
High violence bar (2 or more incidents)	184	1.177	.278	.080	-.065 to .222

Three general conclusions can be drawn from these spatial and statistical analyses. First, neighborhood characteristics may influence violent crime at bars, but they are not the only or major predictor of violent events. Violent bars are no more clustered in violent neighborhoods than are low violence bars. Rather, it appears that all bars tend to form clusters with violent bars mixed in with lesser violent. This finding is consistent with recent literature that suggests that crime opportunities are the product of individual place characteristics; however these micro-level effects may be moderated or strengthened by the characteristics of surrounding environments

(e.g., the neighborhood or street block where the facility is located). For example, place management activities and target hardening measures tend to be more effective in preventing burglaries in neighborhoods with higher levels of target hardening, informal social control, and defense space features (Wilcox, Madensen & Skubak, 2007). The current analyses found bars with varying levels of violence clustered closely together. This strongly suggests that variations in micro-level, place characteristics controlled by place managers is key to understanding why violent crime does or does not occur at these locations.

Second, violence is not inevitable at bars located in high-crime or high traffic areas. Bars located in the downtown district or Over the Rhine were not more likely to experience violence than bars located elsewhere in the city. While previous research on bar violence has found a direct correlation between bar location and crime (e.g., Graham et al., 2006), this relationship may be an artifact of variations in the spatial clustering of bars across cities.

Third, environmental characteristics previously found to be associated with more crime (i.e., corner lot location and close proximity to other drinking establishments) were not significantly associated with more violence across Cincinnati bars. These three general conclusions suggest that micro-environments created by bar managers are at least partially insulated from outside criminogenic influences. Place specific bar characteristics, created and sustained by management, act to suppress or permit violence within these locations. The next section explores the degree to which these characteristics and management practices vary across Cincinnati bars.

Variation in Management Practices

This analysis proceeds with the understanding that the characteristic of the place at the time of observation represent the cumulative effects of previous management experiences and

decisions. All bar functions and characteristics can be attributed to place-manager decision-making – from the interior and exterior décor, to the types of employees hired and method of training, to the building location selected for the establishment. To assess the variation in place manager decision-making, the following analysis will examine differences among (1) the purpose and function of the establishments – beyond the consumption of alcohol, (2) marketing strategies, (3) property characteristics, and (4) management decisions concerning staff, training, and security.

Purpose of the Establishment

Managers reported various “themes” for their bars. Some claimed to be simple neighborhood bars aimed at attracting local clientele, while others offered unique activities or drink specialties to attract customers. For example, some bars offered live entertainment catering to particular musical styles (e.g., punk, jazz, techno, country). Others offered special activities or performances to attract a specific clientele. For example, a cabaret show was offered in one location to attract gay and lesbian customers, while another bar offered big screen televisions and competitive sports-themed games to attract sports fans from nearby stadiums. Still, others attracted alcohol “connoisseurs” by offering specialty drinks such as locally brewed or specialty beers, or extensive wine or martini lists.

Bar managers also attempted to attract customers by offering specific types of food or other “common” bar activities. Over half of the bars offered full meals to patrons. Some offered a specific ethnic cuisine (e.g., Mediterranean, Mexican) and featured customary alcoholic drinks (e.g., ouzo, margaritas). Almost half of the bars offered common competitive games to patrons (i.e., pool, darts, cornhole – a Cincinnati beanbag toss game, or bocce ball) and more than a third

had a specific area within the establishment dedicated as a dance floor. Table 7 summarizes these differences among Cincinnati bars.

Table 7: Purpose of establishment

Variables	n	%
Neighborhood bar	40	20.1
Uncommon bar specialty	39	19.6
Full meals available for purchase	127	63.8
Competitive games	96	48.2
Dancing	72	36.3
Live entertainment	87	43.7

Marketing Strategies

Most bar managers reported wanting to attract an “ideal” patron to their establishment. Many attempted to accomplish this through their bar theme or activities provided. However, almost 76 percent of bars regularly advertised their establishment in at least one type of medium (e.g., television, radio, magazines) with the average bar advertising in at least two mediums on a consistent basis. Other bar managers attempted to attract a particular type of clientele through drink pricing. While the average cost of the least expensive drink in Cincinnati bars was approximately \$2.50, one bar offered alcoholic drinks for \$0.25, while two bars charged \$6.50 for their least expensive alcoholic drink. Approximately 23 percent of the establishments also charged a cover to help regulate access to their establishments at particular times. Only 38.7 percent of bars required that patrons be 21 years of age to enter at all times.

While only about 32 percent of the bar managers reported that their businesses were making a profit, most stated that their advertising methods were working to attract their targeted demographic. Overall, most bar managers (94 percent) reported that they currently attract their ideal customer. Still there was a significant degree of variation in the reported patron

demographics across bars with regard to sex, race, and the proportion of repeat customers (see Table 8).

Table 8: Marketing practices and success

Variables	n	Min	Max	Mean	Median
Number of different advertisement mediums	194	0	6	2.07	2.00
Cost of least expensive drink	196	.25	6.50	2.59	2.50
Charges cover ^d	199	0	1	0.23	0.00
Attracts ideal customer ^d	191	0	1	0.94	1.00
Percentage of male customers	196	10	100	60.20	60.00
Percentage white customers	193	0	100	72.77	85.00
Percentage of customers considered regulars	197	0	100	55.18	50.00
Business making a profit ^d	191	0	1	0.32	0.00

^d = Dichotomous measure (yes = 1)

Property Characteristics

Variation was also noted in both the general size of the establishments and the overall maintenance of the properties. The smallest bar had a maximum occupancy limit of 30 patrons, while the largest bar had a maximum occupancy limit of 1,275 patrons (this bar occupied several floors of a large building).

In order to assess the general condition of each bar, indexes were created to measure disorder found on the exterior, within the interior, and specifically in the restrooms. The exterior disorder index ranges from zero to nine and represents a count of whether broken lights, structural problems, litter, large pieces of junk, overflowing trashcans, graffiti, chipping paint, boarded windows, or broken exterior fixtures/decorations were visible on or around the exterior of the building. The interior disorder index ranges from zero to three and represents a count of whether broken seats/tables, graffiti, or broken lights are visible inside the building. The restroom disorder index ranges from zero to thirteen and represents a count of whether graffiti, dirty floors, leaking pipes, holes in the stall walls, broken doors, no toilet paper, no hand soap, no

paper towels, inoperable toilets, broken mirrors, broken lights, litter, or damaged walls were present in any of the restrooms. Some bars had no signs of disorder in these various locations while others scored relatively high on these indexes (see Table 9).

Table 9: Property characteristics

Variables	n	Min	Max	Mean	Median
Square footage	104	200	25000	3553	2600
Maximum occupancy	192	30	1275	196	140
Exterior disorder index	172	0	7	1.13	1.00
Interior disorder index	193	0	3	0.45	0.00
Restroom disorder index	181	0	9	1.72	1.00

Staff, Training and Security

Variation in place manager decision-making across the bars was also evident in staffing, training, and security-related decisions. Direct manager involvement in daily operations varied. While most bars had an owner or manager present on high volume nights (i.e., Friday nights), 16 percent did not. The number of staff employed varied greatly, and this variation was directly related to the property size and the volume of business conducted within the establishment. Many managers took an informal approach to conducting business, with less than half requiring their employees to wear a uniform or badge and 19 percent allowing employees to consume alcohol while working. About half of the managers provided “in-house” training for employees, while 10 percent had an outside agency offer training - often the State’s Division of Liquor Control. To help regulate the amount of alcohol dispensed by employees, about 60 percent of bars used pour control devices on at least some of their alcohol bottles.

Some bars hired off-duty police officers (19 percent) or security staff (36 percent) to control patron behavior at their establishments. Most managers said that they only hired security staff trained elsewhere or with previous experience. Still, some received training from

management (35 percent) or were required or offered training from an outside organization (22%). In addition to regulating behavior, security staff was often also responsible for enforcing age requirements at the door.

A security index was constructed to measure the number of different types of security features used by management to prevent crime. The security index ranges from 0 to 7 and represents a count of whether the bar has a burglary alarm, a robbery alarm, access codes, cash control procedures, established staff behavioral expectations, weapons for staff, or surveillance cameras. On average, bars in Cincinnati used three of these security measures to prevent crime. Table 10 presents a summary of the variation in staffing, training, and security-related management decisions.

Table 10: Staffing, training and security

Variables	n	Min	Max	Mean	Median
Owner/manager present Friday nights ^d	198	0	1	0.84	1.00
Number of employees	197	1	275	20.25	12.00
Employees wear uniforms or badges ^d	198	0	1	0.45	0.00
Employees can drink while working ^d	197	0	1	0.19	0.00
Employees trained by management ^d	194	0	1	0.49	0.00
Employees trained by outside organization ^d	194	0	1	0.10	0.00
Pour control devices used ^d	197	0	1	0.59	1.00
Bar employs off-duty police officers ^d	196	0	1	0.19	0.00
Bar employs security staff ^d	196	0	1	0.36	0.00
Security staff trained by management ^d	69*	0	1	0.35	0.00
Security staff trained by outside organization ^d	69*	0	1	0.22	0.00
Identification checked at door ^d	197	0	1	0.38	0.00
Security feature index	156	0	5	2.70	3.00

^d = Dichotomous measure (yes = 1)

* = of those that hire security staff

The review of differences in management practices across Cincinnati bars suggests that this is a grouping of heterogeneous facilities. The characteristics of these facilities represent the culmination of variation in place management decisions. The next section attempts to determine

whether this variation is responsible for the non-random distribution of violent crimes across these locations.

Relationship between Management Practices and Violence

Previous research suggests a direct relationship between place management practices and crime. While most research on the relationship between bar management practices and violent crime has been conducted outside of the U.S., this growing body of literature continues to build support for the place management-crime link and influences problem-solving strategies around the world (see Table 11 for a list of variables previously found to be related to violence in bars).

Table 11: Bar variables predictive of violence in previous research*

Bar location and capacity	Physical environment	Social environment
Bar location ^{1,4,7,9}	Noise level ^{1,8,9}	Intoxication of patrons ^{1,3,4,5,9}
Bar capacity ⁴	Inconvenient bar access ⁴	Rowdiness ^{4,9}
	Crowding ^{4,5,6,8,9}	Roughness and bumping ⁴
Characteristics of patrons	Patrons moving about/high turnover ^{1,5,9}	General permissiveness ^{1,2,5,9}
Younger patrons ^{7,8,9}	Smokiness, poor ventilation ^{1,4,8,9}	Swearing ^{1,4,5}
Proportion of underage females ⁴	Extent premises unclean and messy ^{1,4,5,8,9}	Bar staff acceptance of deviant behavior ⁴
Groups of males/groups of male strangers ³	Low expenditure and maintenance ¹	Sexual activity ^{4,5,9}
Ethnicity of patrons ¹	Frequent occurrence of aggression in line-ups ^{2,9}	Sexual contact ^{1,5,9}
Unkempt patrons ¹	Temperature (too warm) ⁸	Sexual competition ^{4,5,9}
Marginal patrons ⁴	Darkness ^{4,8}	Round buying ⁴
People talking to themselves ¹	Seating style ¹	Illegal activities ⁸
Proportion of males in manual working gear ³	Inadequate seating ^{4,5}	Drugs being used or sold ¹
Social class of customers ⁷	Shabby decor ¹	Drug dealing ⁴
	Pleasantness ¹	Prostitution ¹
Staff variables	Comfortableness ^{3,5}	Hostile atmosphere/conversation ¹
Low bar staff to patrons ratio ⁴		Environment not open to strangers ¹
Number of bar staff ⁹	Serving practices and aspects of closing time	Presence of hostile males ⁴
Presence of bouncers ^{4,8,9}	Serving a large amount right before closing ^{7,8,9}	Cheerfulness/friendliness of patrons ⁵
Ability of bar workers to control/diffuse situations ¹	Aggression frequently occurs outside after closing ^{2,7}	Bored patrons ^{3,4}
Lack of staff coordination ⁹	Number of people hanging around after closing ⁹	Activities
Lack of monitoring ⁹	Lack of public transportation ^{4,5,7}	Pool playing/billards ^{1,7,8,9}
Lack of professional boundaries by servers/bartenders ⁹	Cheap drinks ^{3,8}	Dancing ^{1,8,9}
Lack of professional boundaries by security staff ⁹	Refusal of service to intoxicated patrons ^{4,5}	Type of entertainment ^{1,5}
High proportion of male staff ^{1,8}	Lack of responsible beverage service practices ^{4,5}	Poor quality entertainment ³
Friendliness of bar staff ¹		Availability of meals/snacks ^{1,3,4,5}
Aggressive or poorly trained/managed bar staff ³		

¹Graham et al., (1980) and Graham (1985) – analysis of quantitative data from observation in 1978 Vancouver, B.C., Canada

²Graham et al. (2000) and Graham & Wells (2001) – content coding of observations in the late 1990s London, Ontario, Canada

³Hemel, Tomsen & Thommeny (1992) and Tomsen, Homel, & Thommeny (1991) – qualitative analyses of observations in 1989, in Sydney, NSW, Australia

⁴Hemel & Clarke (1994) – analyses of quantitative data from observations in the early 1990s in Sydney, Australia

⁵Hemel et al. (2004) – analyses of quantitative data from observation in 1994 and 1996 in three cities in Queensland, Australia

⁶Macintyre & Homel (1997) – analyses of incidents recorded by a private security company in Surfers Paradise, Queensland

⁷Marsh & Kirby (1992) – qualitative analyses based on observations in five communities in England

⁸Quigley, Leonard, & Collins (2003) – comparisons of violent and non-violent bars identified by survey respondents in Buffalo, New York, 1998-2000

⁹Graham et al. (2006) – quantitative analyses of data from observations in Toronto, Canada

*Table adapted from an earlier version of the following publication: Graham, K., Bernards, S., Osgood, D. W., & Wells, S. (2006). Bad nights or bad bars? Multi-level analysis of environmental predictors of aggression in late-night large-capacity bars and clubs. *Addiction*, 101(11), 1569-1580.

Several case studies found that changes in place management at bars can produce substantial reductions in crime. Operation NETFORCES (Nightclub Education & Enforcement Task Force on Ordinances, Regulations, Codes, and Environmental Safety) implemented in Raleigh, N.C. pressured bar owners and managers to improve safety at their establishments and decreased calls for service by more than 40 percent in places where managers were cooperative (Herman Goldstein Award Submission, 2004). In Geelong, Australia, police worked with bar managers to implement a 12-point policy, called “The Accord,” which was aimed at reducing over-intoxication and “pub-hopping.” While other Australian cities experienced increases in serious assaults, serious assaults in Geelong significantly declined (Felson et al., 1997). In Toronto, Canada, the Safer Bars program helped bar managers to target weak management practices and ultimately reduced incidents of severe and moderate aggression in their establishments (Graham et al., 2005; Graham et al., 2004).

Previous analyses in this study suggest that neighborhood context alone cannot explain the distribution of violent crimes across Cincinnati bars. We have also learned that there is a great deal of variation in the methods used to manage Cincinnati bars. Therefore, our final set of analyses attempts to assess the relationship between place specific management practices and violent crime at Cincinnati bars. The analyses are structured to determine whether management decisions regarding (1) the purpose and function of the establishments, (2) marketing strategies, (3) property characteristics, or (4) staff, training, and security are significantly related to violence in these establishments. A dichotomous dependent variable is used to determine if particular management decisions are significantly associated with “high violence” bars. A high violence bar is defined as a bar that experienced two or more documented incidents of violence.

Purpose of Establishment and Violent Crime

Previous research has found that competitive games (e.g., Quigley et al., 2003) and activities that increase patron proximity and interaction, like dancing (e.g., Graham et al., 2006), increase the likelihood of violence. Bivariate analyses in the present study support these earlier findings. Violence is significantly more likely to occur in bars offering competitive games or dancing (see Table 12). Bars that offered competitive games experienced an average of 1.41 violent crimes while those who did not offer such activities experienced an average of 0.84 violent crimes. Similarly, bars that offered dancing experienced an average of 1.57 violent crimes while bars without a dance floor experienced an average of 0.90 violent crimes.

Table 12: Chi-square tests - purpose/functions and high violence bars

Bar purpose variables	n	χ^2	sig	Phi (Φ)	Φ 95% CI
Neighborhood bar	184	.106	.745	-.024	-.168 to .121
Uncommon bar specialty	184	.007	.933	.006	-.138 to .150
Full meals available for purchase	151	1.181	.277	-.088	-.244 to .072
Competitive games	180	6.791	.009	.194	.050 to .330
Dancing	184	6.497	.011	.188	.045 to .323
Live entertainment	184	1.030	.310	.075	-.070 to .217

Marketing Strategies and Violent Crime

One marketing approach variable, one demographic variable, and whether the bar attracts management's concept of the ideal customer are significantly related to levels of violent crime. The analyses suggest that bars offering less expensive drinks have higher levels of violence. More violence also occurs at bars with a higher percentage of non-white customers (see Table 13).

Table 13: Bivariate logistic regression - marketing and high violence bars

Bar purpose variables	n	B	s.e.	sig	Exp(B)
Number of different advertisement mediums	180	.115	.104	.271	1.121
Cost of least expensive drink	181	-.520	.207	.012	.595
Percentage of male customers	181	.011	.011	.303	1.011
Percentage white customers	178	-.013	.005	.021	.987
Percentage of customers considered regulars	182	.005	.007	.424	1.005

Not surprisingly, higher levels of violence were recorded in bars where unwanted customers were attracted. Bar managers reporting that the ideal customer was not being attracted to their bars had a mean number of 3.18 violent incidents while those who were attracting their ideal patrons had a mean number of 0.96 violent incidents documented at their establishment (see Table 14). The data also suggest that the types of patrons who frequent a bar are not solely determined by the bar's location. There is no significant relationship between whether or not the bar was described by the manager as a neighborhood bar and whether or not the bar was attracting the ideal customer ($p = 1.000$). This suggests that marketing strategies may play a significant role in determining the types of patrons who frequent the establishment.

Table 14: Chi-square tests - marketing decisions and high-violence bars

Bar purpose variables	n	χ^2	sig	Phi (Φ)	Φ 95% CI
Charges cover	184	1.013	.314	.074	-.071 to .216
Attracts ideal customer	177	na ^a	.001	-.291	-.420 to -.150
Business making a profit	176	.112	.738	.025	-.172 to .123

NOTE: ^aFisher's exact test used since one cell had an expected count of less than 5. df=1. sig 2-tailed.

Property Characteristics and Violent Crime

Bars with higher maximum occupancy limits experienced more violent crime. The more people permitted within an establishment, the more interaction occurs. This bivariate analysis suggests that increased interaction translates into higher levels of violent crime (see Table 15).

The relationship between the disorder index variables and violent crime are particularly interesting. Levels of disorder can be used as a proxy measure for levels of place management.

We would expect that lower levels of disorder would be related to more active and responsive place management activities. We can also assume that place managers have greater control over the interior conditions of their establishment than the exterior based on the fact that managers can better control access to the interior portions of their facilities. While the exterior disorder index does not reach significance, both the interior and restroom disorder indexes are positively and significantly related to violent crime in these establishments. Bars with higher levels of disorder observed in publically accessible areas within the bar or restrooms also had higher levels of violent crime (see Table 15). A significant correlation exists between the interior and restroom disorder indexes ($r = .302$; $p = .000$).

Table 15: Bivariate logistic regression - property characteristics and high violence bars

Property characteristics variables	n	B	s.e.	sig	Exp(B)
Square footage	98	.000	.000	.984	1.000
Maximum occupancy	177	.002	.001	.048	1.002
Exterior disorder index	161	.172	.132	.194	1.188
Interior disorder index	178	.761	.252	.003	2.141
Restroom disorder index	168	.212	.084	.012	1.236

Staffing, Training, Security, and Violent Crime

Bivariate regression analysis suggests that bars with more security features have higher levels of violent crime (see Table 16). The staff, training, or security-related variables significantly related to violent crime in Cincinnati bars include whether or not bars employ security staff (but not off-duty police officers) and whether or not identification is checked at the door. Both of these variables are highly and significantly correlated ($r = .708$; $p = .000$). Also, bars that allow employees to drink while working are significantly more likely to be high violence bars.

Table 16: Bivariate logistic regression - staffing/training/security and high violence bars

Staffing/training/security variables	n	B	s.e.	sig
Number of employees	182	-.007	.008	.379
Security feature index	156	.271	.137	.048

Table 17: Chi-square tests - staffing/training/security and high violence bars

Staffing/training/security variables	n	χ^2	sig	Phi (Φ)	Φ 95% CI
Owner/manager present Friday nights	183	.167	.683	-.030	-.174 to .115
Employees wear uniforms or badges	183	.168	.682	-.030	-.174 to .115
Employees can drink while working	182	6.241	.012	.185	.041 to .321
Employees trained by management	179	.017	.897	.101	-.046 to .244
Employees trained by outside organization	179	.951	.330	-.073	-.217 to .074
Pour control devices used	182	.025	.874	-.012	-.157 to .133
Bar employs off-duty police officers	184	.173	.678	.031	-.114 to .174
Bar employs security staff	181	6.346	.012	.187	.043 to .324
Security staff trained by management	66	.150	.699	-.048	-.286 to .196
Security staff trained by outside organization	66	.003	.955	-.007	-.248 to .235
Identification checked at door	183	13.088	.000	.267	.127 to .396

Obviously, these findings beg the question posed by the problem of determining temporal order. Do bars hire security staff in an effort to control violence? Or does security staff encourage violent behavior in bars? Perhaps the answer lies somewhere in-between. Unfortunately, only longitudinal, ethnographic studies could answer this question. Still, the finding that bars with security staff suffer from higher levels of violence suggests that security staff training may be a critical component of any violence reduction strategy in bars.

Multivariate Analysis of Management Practices and Violent Crime

Multivariate logistic regression analysis was conducted to determine which management practices contribute most to the level of violence in bars. Once cases with missing data were removed from the sample, 139 cases were available for analysis. The small sample required the use of a paired-down logistic regression model. Only significant variables identified in the

bivariate analysis⁴ were included in the multivariate logistic regression analysis.⁵ The results of this analysis are presented in Table 18.

Table 18: Multivariate logistic regression - management practices and high-violence bars

	B	s.e.	sig	Exp(B)
Bar purpose variables				
Competitive games	-.134	.558	.811	.875
Dancing	.231	.561	.680	1.260
Marketing variables				
Cost of least expensive drink	-.723	.318	.023	.486
Percentage white customers	-.011	.009	.238	.989
Attracts ideal customer	-3.634	1.282	.005	.026
Property characteristic variables				
Maximum occupancy	.003	.002	.062	1.003
Interior disorder index	.498	.423	.239	1.646
Staffing/training/security variables				
Security feature index	.490	.196	.012	1.633
Employees can drink while working	.941	.580	.105	2.562
Bar employs security staff	.458	.566	.418	1.581

Once all of the significant variables were added to the model, only the cost of the least expensive drink, whether or not the bar attracts its ideal customers,⁶ and the number of security

⁴ Ideally, only theoretically important variables are used in multivariate analysis. However, this study investigated aspects of place management that were beyond extant theory, so it was unclear which variables should be included. Further, the number of bars available for study prevented using all management variables in the analysis. So we used significant bivariate results as a guide to which variables to examine at in the multivariate analysis.

⁵ The interior disorder index had fewer cases with missing data than the restroom disorder index. Since the interior and restroom disorder indexes are highly and significantly correlated and both represent levels of disorder within the establishment, only the interior disorder index was used in the multivariate analysis. Whether or not identification was checked at the door was also excluded due to the theoretical and significant correlation found between this variable and the use of security staff.

⁶ The bars not attracting their ideal customers are not identical to the most violent bars. Of the 13 bars that experienced 4 or more violent incidents, only 3 claimed that they were not attracting their ideal customers. The bars that failed to attract their ideal customers (n = 11) accounted for 19.7% of all violent incidents (with 10 of these bars accounting for 14.1%). Failure to attract the ideal customer is not the only variable that matters. Although failure to attract the ideal customer can be seen as an outcome of previous manager decisions (e.g., selection of bar location, marketing strategies); other management practices appear to matter as well.

features used by the bar remains significant. The analysis suggest that bars that charge less for alcohol, do not attract their preferred customers, and those that use more security features are more likely to experience violence.⁷

We must again consider the problem of establishing temporal order, particularly concerning the use of security measures. For example, bars managers may have installed more security features after having experienced violent incidents. It is unlikely, if all other influencing factors are equal, that more secure bars would experience more incidents of violence. While bivariate analyses do not suggest that bars in high crime areas use more security features (see Table 19), managers may use these interventions after their marketing strategies fail to attract their ideal (non-violent) patrons.

Table 19: T-tests - bar location and use of security features

Bar location	n	t	df	sig	Eta ²
Bar located downtown ^c	156	-1.227	34	.228	.007
Bar located in Over The Rhine	156	.382	154	.703	.001
Bar located in Over the Rhine or downtown ^c	156	-.754	62	.454	.003

NOTE: ^cEqual variances could not be assumed based on significant value for Levene's test for equality of variances

These analyses suggest that marketing strategies (e.g., cost of alcohol) and the success of marketing strategies (e.g., whether the bar attracts their targeted demographic) are the most significant predictors of violence.

⁷ No significant correlation exists between the cost of the cheapest drink at the bar and whether or not the bar attracts management's idea of the ideal customer ($r = .090$; $p = .239$).

Apartment Methodology

Data Sources

Secondary Data

Land parcels. Data regarding land use were obtained from the Hamilton County Auditor's Office to identify land parcels as "apartments." The Auditor is required to classify each land parcel according to its current principal use (ORC 5713.041). The Ohio Administrative Code classifies apartment buildings with more than four units as "commercial land" because the principal use for these properties is revenue generation for the owner. The Auditor's data also included the mailing address for the owner of each land parcel.

Geography and Census. Geographic data were obtained from the Cincinnati Area Geographic Information System (CAGIS). Street networks obtained from CAGIS were used to geocode land parcel data from the Auditor's Office. Cincinnati neighborhood boundaries were also obtained from CAGIS. Data from the 2000 Census were obtained from ESRI's online repository of Census data.

Crime. Crime data were obtained from the Cincinnati Police Department. Calls for service data from 2006 were used to create the dummy indicator of high violence used to stratify our sample. Calls for service tend to be a more inclusive measure than Unified Crime Report data, and our definition of a "violent call for service" was purposefully inclusive as well (see Appendix III for a list of codes defined as violent). An inclusive measure of violence was used because the project's focus is on management and management problems. A call to the police can be conceptualized as a failure of other less formal methods of conflict resolution.

Primary Data

Apartment Manager Survey. The Apartment Manager Survey gathered information about both the buildings (e.g., year built, number of units) and management practices at the apartment (e.g., how often the owner visits the property, behavioral restrictions in the lease). The Apartment Manager Survey is included as Appendix IV.

Unlike bar owners, apartment owners are often not available at their properties. A visual inspection of apartments in Cincinnati revealed that many apartment buildings did not have on-site offices where a face-to-face contact could easily be made. Examination of the Auditor's data also showed that many apartments are owned by limited liability corporations and other corporate entities instead of by individuals, making it difficult to identify a point of contact. We chose to survey apartment owners via postal mail instead of face-to-face despite the problems inherent with mail surveys. We followed Dillman's (2000) method for conducting apartment owner surveys. Specifically, owners were mailed a survey on May 9, 2007, along with a cover letter describing the survey and a postage-paid return envelope. Three weeks later, a reminder postcard was mailed. Four weeks after that, a second survey and cover letter were mailed. Finally, we attempted to increase our response rate via telephone. The lack of an available sampling frame with telephone numbers frustrated this attempt.

Apartment Site Observation Survey. The Apartment Site Observation Survey gathered information about the visible features of the apartment complex (e.g., lighting, physical condition of buildings, security features) and the surrounding area (e.g., litter surrounding the complex, nature of surrounding land parcels). The Apartment Site Observation Survey is attached as Appendix V.

Apartment site observations were completed between April 1, 2007 and June 15, 2008. Graduate students were trained how to complete the survey instrument and project goals. These students completed the apartment site observation survey instruments during daylight hours between 6:50 A.M. and 5:50 P.M. under supervision of the Project Director and Principal Investigator. Students were instructed to only go to parts of the property that were open to the public. Where locked gates or doors barred access, observations were made from outside these barriers.

The initial goal was to obtain a site observation for each apartment complex in our sample. We revised this after receiving our mail survey responses. Our goal then changed to obtaining a site observation for each mail survey received, plus gathering enough site observations per neighborhood to be able to estimate multi-level models using the site observation data.

Sampling Design

The goals of this project were threefold: 1) describe management practices at apartments; 2) determine how these practices influence crime at apartments; and 3) determine how apartment management practices interact with neighborhood context. Our sampling procedure of apartments therefore had to consider several methodological issues. These issues are summarized in Table 20 and discussed in the following paragraphs.

Table 20: Methodological Issues and Solutions

<i>Methodological Issue</i>	<i>Solution</i>
Determine neighborhood context	Cluster apartments within neighborhoods to ensure enough cases per aggregate
Ensure respondents complete survey and give information regarding the correct property	Include each owner only once in the sample.
Determine management practices of apartments	Combine nearby land parcels owned by a single entity into an “apartment complex”
Determine how management practices influence crime	Include apartment complexes with unusually high violent crimes (9 or more in 2006)

Neighborhood Groups. **We began with a database of land parcels classified as apartments from the Hamilton County Auditor. Land parcels were geocoded using street network and neighborhood boundary data provided by CAGIS. We then determined the number of apartment complexes in each neighborhood (see Table 2 above.) Several neighborhoods provided too few cases for multilevel modeling. Several of these neighborhoods were combined into neighborhood groups to facilitate sampling and analysis.**

Figure 10 below shows the neighborhoods as grouped for sampling and analysis.

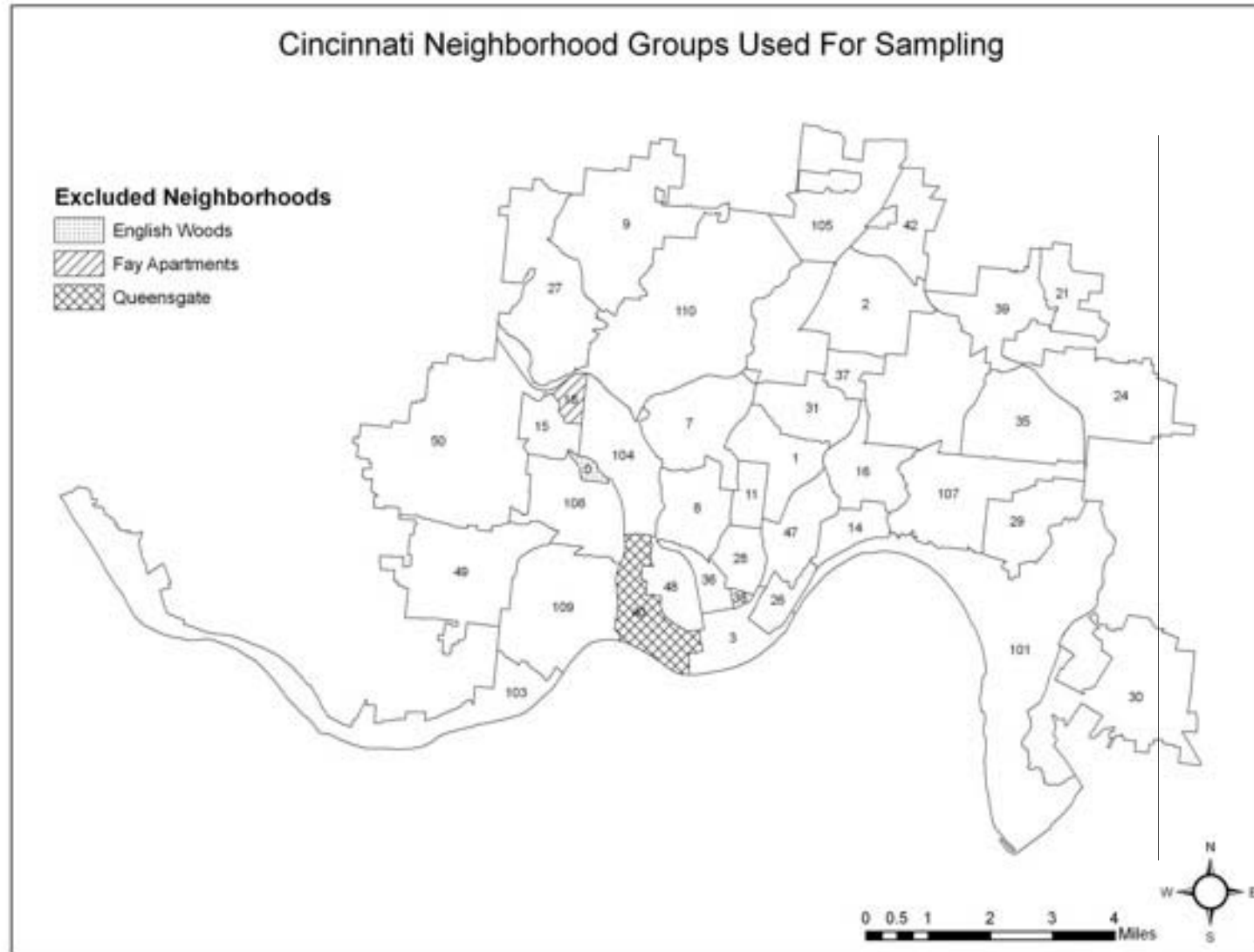
Neighborhoods were combined only when they were adjacent and similar in demographics (e.g., percent of population under poverty line, percent of population nonwhite).

Table 21 below shows which neighborhoods were grouped together. Three neighborhoods were excluded from analysis due to too few apartment complexes: English Woods (n=0) and Queensgate (n=1). Fay Apartments was excluded because the entire neighborhood is one large apartment complex. Fay Apartments is very different from any other apartment complex in Cincinnati and may be better suited to a small N case study.

Table 21: Neighborhood Groups

<i>Group Number</i>	<i>Neighborhood Group Name</i>	<i>Neighborhoods Combined to Form Group</i>
101	East River	California Columbia/Tusculum East End Linwood
103	West River	Riverside Saylor Park Sedamsville
104	Mill Camp	Camp Washington Millvale South Cumminsville
105	North Mill Creek	Carthage Hartwell
107	Greater Hyde Park	Hyde Park O'Bryonville
108	Greater Fairmount	North Fairmount South Fairmount
109	Lower East Price Hill	Lower Price Hill East Price Hill
110	Central Mill / Northside	Winton Hills Winton Place Northside
111	Pleasant Ridge & Kennedy Heights	Pleasant Ridge Kennedy Heights
112	Roselawn & Bond Hill	Roselawn Bond Hill
113	Clifton & University Heights & Fairview	Clifton University Heights Fairview

Figure 10: Neighborhood Groups Used for Sampling.



Sampling Procedure. Land parcels were first aggregated by owner within each neighborhood. Forty owners were then selected from each neighborhood. Fifty-two owners appeared in our sample twice (because they own apartments in multiple neighborhoods). These non-unique owners were randomly selected and replaced where possible. This resulted in 1,411 unique owners across 38 neighborhoods groups.

The next step was to disaggregate the land parcels. Our interest was in the management of “apartment complexes,” which we defined as a grouping of physically contiguous apartment land parcels owned by the same person or entity. Specifically, apartment land parcels were combined into an “apartment complex” when they were: 1) owned by the same owner; and 2) located on the same side of the street within the same 100 block of a street; or 3) obviously part of a larger complex when mapped.⁸ One hundred fifty-five owners held multiple complexes within a single neighborhood. One complex was selected at random from each of these owners. All other owners held a single complex.

High violence apartment complexes were then added. An apartment complex was defined as “high violence” when nine or more calls for service involving violence occurred in 2006. Nine or more was chosen as a cut point based on the frequency of calls for police service involving violence to apartment complexes in 2006. As Table 22 shows, the majority of apartment complexes (63.0%) had no such calls in 2006. The next most frequent category is just one call (14.9%). The overwhelming majority of apartment complexes had either no calls for

⁸ Despite the potential for error, this definition of “apartment complex” is simple, easily described, and easily reproducible. The risk of error was deemed acceptable for the sampling stage of the project. Our data collection involved sending graduate students to each site, which corrected errors in the definition of “apartment complex” in the data used for analysis. Of the 994 apartment complexes visited, fewer than 40 (4%) required correction based on observation.

police services involving violence or had a small number of calls. The nine or more category therefore represents the extreme end of the distribution.

Table 22: Number of Calls for Police Service Involving Violence

<i>Number of calls</i>	<i>Frequency</i>	<i>Percent</i>	<i>Cumulative Percent</i>
0	3,122	63.0	63.0
1	736	14.9	77.8
2	354	7.1	85.0
3	208	4.2	89.2
4	104	2.1	91.3
5	79	1.6	92.9
6	53	1.1	93.9
7	40	0.8	94.8
8	36	0.7	95.5
9 or more	224	4.5	100.0
N	4,956	100.0	

After adding all high-violence apartment complexes to the sample, we once again examined our sample for non-unique owners. High-violence complexes were favored in this process. Where an owner held both high-violence and non-high-violence complexes, the high-violence complex was retained. In such cases, the non-high violence complex was replaced where possible.

This sampling procedure yielded a final result of 1,451 apartment complexes in 38 neighborhood groups, each owned by a different person or corporate entity. Of these, 98 (6.8%) had nine or more calls for police service involving violence in 2006.

Response Rate

Apartment Manager Survey. The first wave of Apartment Manager Surveys was mailed May 9, 2007. This survey wave yielded 200 valid responses. An additional 98 valid

responses were received after wave two was mailed on June 28, 2007. Nine more surveys were conducted via telephone in early 2008. The total response rate was 21.15% (n=307).⁹

Apartment Site Observation Survey. Apartment Site Observation Surveys were conducted between March 2007 and June 2008. A total of 1,040 site observations were attempted. Forty-six of these were unsuccessful, yielding 994 usable site observations surveys for a completion rate of 95.6%.¹⁰

Results

Conceptual Models

As previously discussed, evidence suggests that a lack of place management can lead to crime (Eck and Weisburd, 1995; Felson, 1995). However, little is known specifically about how placement management affects crime at apartment complexes or if place management

⁹ While admittedly low, our response rate of 21.15% is not unusual for businesses. Dillman (2000) reports a study of 183 business surveys, for which the average response rate was 21%. Such low response rates from businesses occur particularly when the only contact possible is via mail – a point made by our comparatively large response rate for bars (83%), for which in-person contacts were possible. Our sampling frame for apartments, however, did not include telephone numbers, and in many cases only a name and mailing address was provided. This, combined with the low incidence of rental offices (15%), limited the methods available to contact apartment owners. As is common with mail surveys, most apartment manager surveys (59.6%, n=865) were not returned. Another 30.94% (n=449) were returned to sender for various reasons, mostly unknown addressees. New address information was obtained from the Hamilton County Auditor for 179 of these and replacement surveys were sent. A small percentage of respondents refused to participate (1.6%, n=23). Seven respondents (0.48%) indicated that the property was no longer an apartment (building had been razed or converted to single family dwelling). Ten respondents (0.69%) indicated that they had sold the property but attempts to include the new owner were not successful.

¹⁰ Twenty-seven of the unsuccessful site observations were due to observers being unable to find the apartment complex. One complex was clearly abandoned and unsafe. Eight complexes were inaccessible due to fences or gates. Seven complexes were clearly not apartments (the buildings had been razed or converted to single-family dwellings). Only two sites asked observers to leave the property.

approaches need to differ across neighborhoods. Our research aimed to address these issues by examining how managerial practices and apartment characteristics influence violent crime at apartment complexes. Additionally, we examine the physical and social characteristics across 34 Cincinnati neighborhoods to see how community context influences the place management of apartments.

Separate analyses were completed on the Apartment Manager Survey and Apartment Site Observation data because these respective instruments measured different aspects of management (see methods section above). Our conceptual models for these separate analyses from the two data sources are illustrated in Figure 11 and Figure 12. Figure 11 shows the model for variables in the manager survey. We hypothesize that the accessibility, traffic, and image of an apartment complex will have direct effects on high violence and criminal opportunity. Figure 12 shows the model for variables in the site observation survey. We hypothesize that manager presence and experience, checks and security measures utilized by managers, and the financial and residential stability of the manager and his/her tenants will directly affect high violence.

In addition to direct effects between managerial practices and high violence, we also examine if community contextual factors have both direct effect on violence and moderating effects on the relationships between managerial practices and decision and violence. As illustrated by solid arrow 2 in both Figure 11 and Figure 12, we posit that neighborhood disadvantage, neighborhood instability and neighborhood level crime may directly affect violence at apartments, net of complex-level management decisions and practices. Moreover, as suggested by dashed arrow 3 in both Figure 11 and Figure 12, we hypothesize that concentrated disadvantage, instability, and violent crime will condition the effects of the apartment and

management characteristics on high violence. We posit that the effect of managerial practices and decisions on violence might vary according to neighborhood conditions.

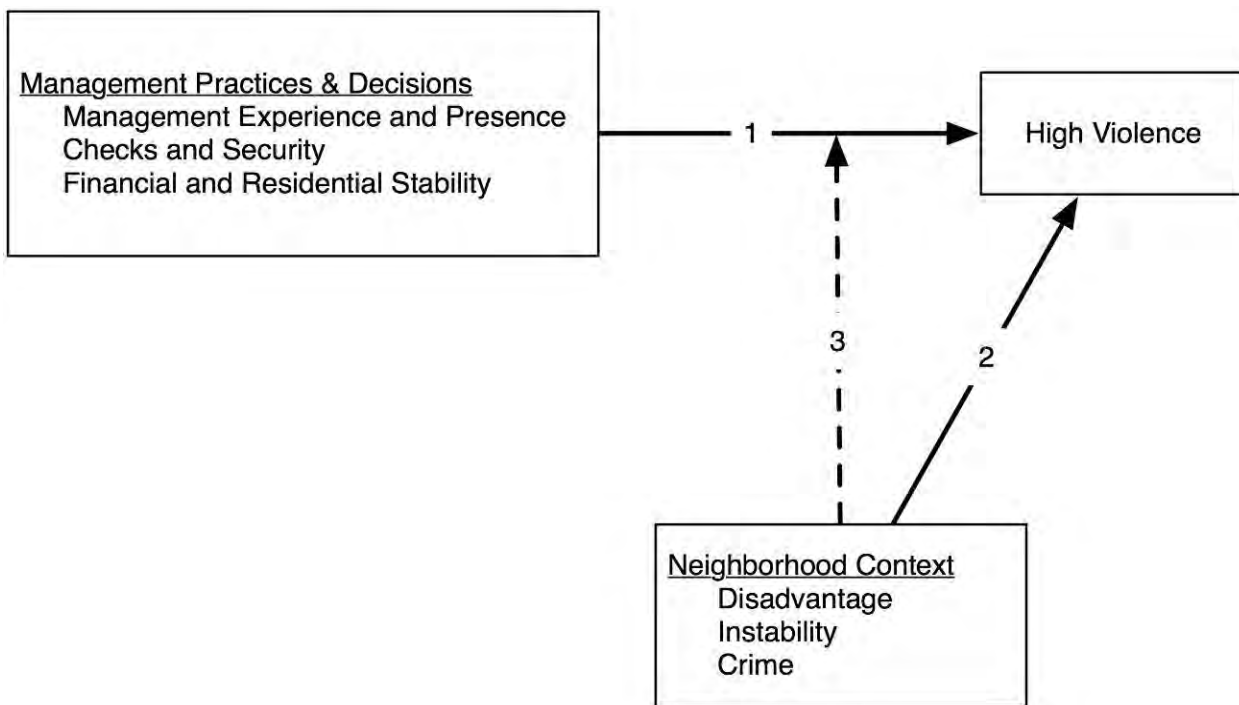


Figure 11: Apartment Manager Survey Conceptual Model

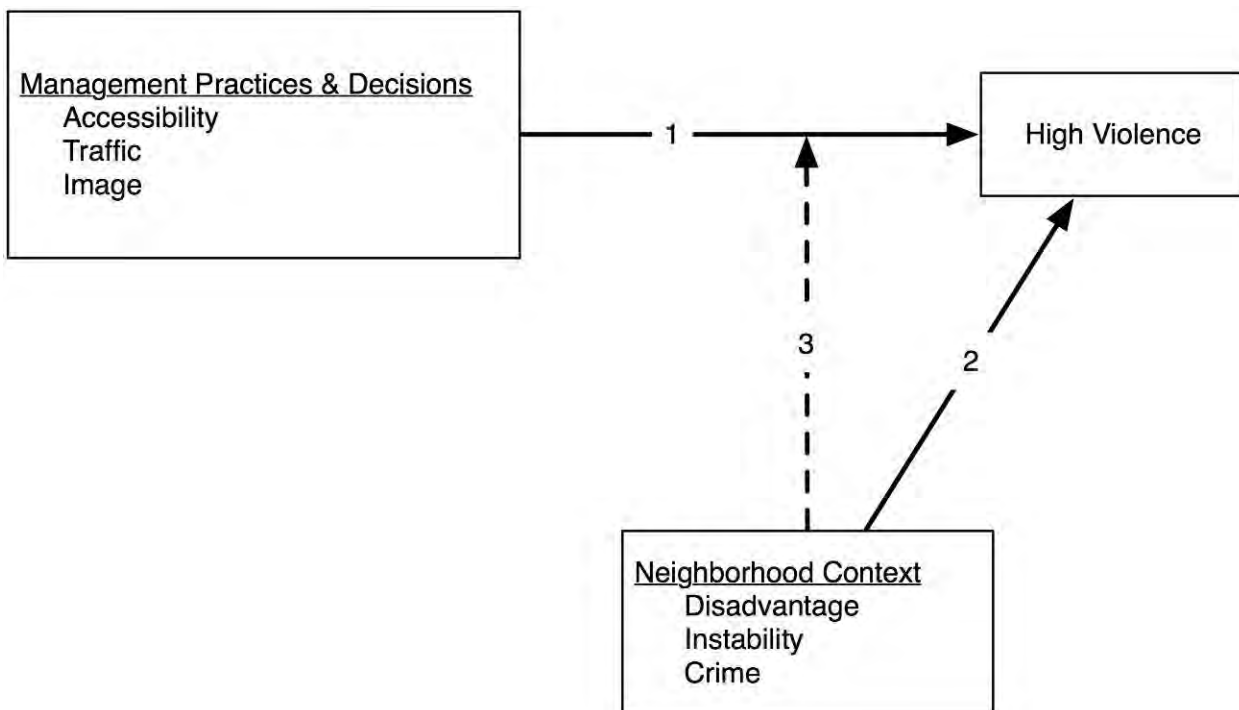


Figure 12: Apartment Site Observation Survey Conceptual Model

Apartment Manager Survey Measures

The measures from the Apartment Manager Survey were divided into three clusters of variables; the management experience and presence cluster, the checks and security cluster, and the financial and residential stability cluster. The management experience and presence cluster includes the *frequency of visits*, *own other apartments in Cincinnati*, and *rental office* measures. Table 23 provides a summary of these measures. The *frequency of visits* measure reflects how often the owners of the property visited the apartments. Values for this variable include daily, weekly, monthly, quarterly, yearly, and less than once a year visitations. The *own other apartments in Cincinnati* measure reflects the number of additional apartment complexes that the managers owned within the city. Values for this variable include no other apartments, one apartment, two to three apartments, and four or more apartments. The rental office measure indicates if there is a rental or management office located on the premise of the apartment complex. This measure was dichotomous and was coded as either yes or no.

Table 23: Descriptive Statistics: Management Experience and Presence Cluster

<i>Variable Name</i>	<i>Frequency*</i>	<i>Percent</i>
Frequency of Visits		
1 = Daily	67	23.3
2 = Weekly	154	53.5
3 = Monthly	44	15.3
4 = Quarterly	17	5.9
5 = Yearly	4	1.4
6 = Less than once a year	2	0.7
Total	288	100
Own Other Apt. in Cincinnati		
0 = None	98	33.7
1 = 1	56	19.2
2 = 2-3	59	20.3
3 = 4 or more	78	26.8
Total	291	100
Rental Office		
0 = No	250	84.2
1 = Yes	47	15.8
Total	297	100

* The total number of responses varies by item due to missing data.

The checks and security cluster includes the *financial background*, *criminal background*, *previous landlord contacted*, and *number of evictions served* measures. Table 24 provides a summary of these measures. The *financial background* measure indicates whether prospective tenants were required to undergo financial background checks prior to renting a unit. The *criminal background* measure indicates whether criminal background checks were conducted on potential tenants prior to moving into the complex. The *previous landlord contacted* measure reflects whether potential tenant's previous landlords were contacted during the application process. The *financial background*, *criminal background*, and *previous landlord contacted*

measures were each dichotomous and coded as either yes or no. The *number of evictions served* measure reflects a raw count of evictions served for each apartment complex.

Table 24: Descriptive Statistics: Checks and Security Cluster

<i>Variable Name</i>	<i>Mean</i>	<i>SD</i>	<i>Minimum</i>	<i>Maximum</i>	<i>N</i>
Financial Background					
0 = No	0.656	0.476	0	1	291
1 = Yes					
Criminal Background					
0 = No	0.639	0.481	0	1	294
1 = Yes					
Previous Landlord Contacted					
0 = No	0.772	0.420	0	1	290
1 = Yes					
Number of Evictions Served	1.832	4.804	0	49	292

The financial and residential stability cluster includes the *financial status*, *tenure*, *delinquent rent*, *section 8*, and *vacant* measures. Table 25 provides a summary of these measures. The *financial status* measure reflects the current financial status that respondents thought best described the apartment complex. Values for this variable include making a profit, breaking even, and losing money. The *tenure* measure reflects the percentage of tenants that have lived at the apartment for two or more years. The percentages for this measure were broken down into categories of fewer than 10%, 10 to 25%, 26 to 50%, 51 to 75%, 76 to 90%, and 91 to 100%. The *delinquent rent* measure reflects the percentage of tenants that are currently delinquent in their rent payments. The *section 8* measure reflects the percentage of the apartments that are rented by Section 8 voucher holders. The *vacant* measure indicates the percentage of units that were vacant each month. The percentages for the *delinquent rent*, *section 8*, and *vacant* measures were broken down into categories of fewer than 10%, 11 to 25%, 26 to 50%, and 51% and above.

Table 25: Descriptive Statistics: Financial/Residential Stability Cluster

<i>Variable Name</i>	<i>Frequency</i>	<i>Percent</i>
Financial Status		
1 = Making profit	105	42.5
2 = Breaking even	82	33.2
3 = Losing money	60	24.3
Total	247	100
Delinquent Rent		
0=0%	140	47.1
1= 1-10%	83	27.9
2 = 11-25%	52	17.5
3 = 26-50%	14	4.7
4 = 51% or more	8	2.7
Total	297	100
Vacant		
0 = 0%	65	22.3
1= 1-10%	120	41.2
2 = 11-25%	53	28.3
3 = 26-50%	39	13.4
4 = 51% or more	14	4.8
Total	291	100
Section 8		
0 = 0%	208	70.7
1= 1-10%	39	13.3
2 = 11-25%	23	7.8
3 = 26-50%	11	3.7
4 = 51% or more	13	4.4
Total	294	100
Tenure		
1 = Under 10%	32	10.8
2 = 10-25%	40	13.6
3 = 26-50%	86	29.3
4 = 51-75%	71	24.1
5 = 76-90%	39	13.3
6 = 91-100%	26	8.8
Total	294	100

Apartment Site Observation Survey

The measures from the site observation survey were divided into three clusters of variables: the accessibility cluster, the traffic cluster, and the image cluster. The accessibility cluster includes the *corner lot*, *unit access*, *alley*, *complex access*, *secure complex*, and *number of entrances* measures. Table 26 provides a summary of these measures. The *corner lot* measure reflects whether the apartment complex was located on a corner lot with two conjoining boundaries coded as streets. This measure and was coded as either yes or no. The *unit access* measure reflects whether the units in the building are accessed by tenants through the interior or exterior of the building. The *alley* measure reflects whether any of the boundaries of the complex were coded as an alley. This measure was coded as either yes or no. The *complex access* measure is an index of the mean for the four boundaries of the apartment complex. Higher values of this measure reflect more accessible complexes. The boundary values included inaccessible, resident only, partially enclosed, and completely accessible. The *secure complex* measure indicates whether the apartment complex was secured by a swipe card, key, call box, attendant station, or other security measure. This measure was coded as either yes or no; a yes was given for any complex that was secured by one or more of these security measures. The *number of entrances* measure reflects a count of clearly demarcated entryways into the apartment complex.

Table 26: Descriptive Statistics: Accessibility Cluster

<i>Variable Name</i>	<i>Mean</i>	<i>SD</i>	<i>Minimum</i>	<i>Maximum</i>	<i>N</i>
Corner Lot					
0 = No	0.221	0.417	0	2	988
1 = Yes					
Unit Access					
0 = Interior	0.279	0.449	0	1	981
1 = Exterior					
Complex Access Index					
1 = Inaccessible					
2 = Resident only	3.317	0.750	1	4	985
3 = Partially enclosed					
4 = Completely accessible					
Secure Complex					
0 = No	0.095	0.294	0	1	977
1 = Yes					
Alley					
0 = No	0.035	0.184	0	1	965
1 = Yes					
Number of Entrances	0.941	0.631	0	8	982

The traffic cluster includes the *bus*, *traffic light*, and *street direction* measures. Table 27 provides a summary of these measures. The *bus* measure reflects a count of the bus stops that were located within one block of the apartment complex. The *traffic light* measure indicates whether there were traffic lights on any of the four boundaries of the apartment complex that were coded as streets. This measure was coded as either yes or no. The *street direction* measure reflects the mean of street directions for boundaries of the apartment complex that were coded as streets. Boundaries coded as streets were given values of either one-way or two-way.

Table 27: Descriptive Statistics: Traffic Cluster

<i>Variable Name</i>	<i>Mean</i>	<i>SD</i>	<i>Minimum</i>	<i>Maximum</i>	<i>N</i>
Bus	0.457	0.830	0	6	988
Street Direction Index					
1 = One-way	1.903	0.292	1	2	954
2 = Two-way					
Traffic Light					
0 = No	0.191	0.393	0	1	994
1 = Yes					

The image cluster includes the *incivilities*, *severe incivilities*, *loiter*, *signage*, and *street light* measures. Table 28 provides a summary of these measures. The two incivilities measures were created using a Principal Components Analysis with varimax rotation; the factor scores were saved and used for subsequent analyses.¹¹ The *incivilities* factor is an index that includes a count of exterior litter, exterior junk, interior litter, interior junk, alcoholic drink containers, and whether the communal trash areas were overflowing. The *severe incivilities* factor is also an index that includes whether there was broken car glass in the parking area, the proportion of broken lights, the proportion of buildings with graffiti, the proportion of the buildings with chipping paint, the proportion of the buildings with structural problems, and the proportion of broken windows. The *loiter* measure indicates whether there were people loitering outside of the apartment complex. This measure was dichotomous and was coded as either yes or no¹². The

¹¹ These two factors together explained 43.635% of the variance and had a KMO value of 0.724.

¹² We could only measure whether loiterers were present at the time of the site observation (i.e., one point in time). Data collection generally lasted less than 30 minutes per site. For safety reasons, the majority (55.7%) of our site observations occurred before noon, with all observations occurring between 6:50am and 5:50pm. Surprisingly, loitering was not significantly correlated with the time of the observation (Pearson's $r=-0.58$, $p=0.072$).

signage measure is the number of signs¹³ posted by the complex management in and around the property. The *street light* measure reflects a count of overhead street lights on blocks represented by boundaries that have been coded as streets.

Table 28: Descriptive Statistics: Image Cluster

<i>Variable Name</i>	<i>Mean</i>	<i>SD</i>	<i>Minimum</i>	<i>Maximum</i>	<i>N</i>
Incivilities Factor	0.000	1.000	-0.693	8.658	994
Severe Incivilities Factor	0.000	1.000	-0.621	5.569	994
Loiter					
0 = No	0.065	0.247	0	1	982
1 = Yes					
Signage	1.044	1.345	0	9	992
Street Light	3.717	3.009	0	30	990

Neighborhood-level Data

The neighborhood-level measures that were examined include *concentrated disadvantage*, *instability*, and *violent crime rate*. Table 29 provides a summary of these measures. An exploratory Principal Component Analysis with varimax rotation showed that our Census measures tapped two separate concepts: 1) Concentrated disadvantage, and 2) Instability.¹⁴ The *concentrated disadvantage* factor includes the proportion of population below poverty line, proportion of population that is nonwhite, proportion of population that is aged 5 to 21, and the proportion of households that are female headed with children. The *instability* factor includes the proportion of residents aged 5 or more living in a different house in 1995 and 2000,

¹³ Any sign posted by the apartment complex management was counted. Examples include various welcome messages, vacancy notices, and behavioral rules such as parking regulations, no trespassing, no soliciting, and no loitering.

¹⁴ These two factors together explained 73.22% of the variance and had a KMO value of 0.606.

proportion of vacant housing units, proportion of renter-occupied housing units, and proportion of the population that is Hispanic. The *violent crime rate* measure is the number of calls for service regarding violent incidents in 2006 divided by the neighborhood group total population for that neighborhood as of the 2000 Census.

Table 29: Descriptive Statistics: Neighborhood-level Measures

<i>Variable Name</i>	<i>Mean</i>	<i>SD</i>	<i>Minimum</i>	<i>Maximum</i>	<i>N</i>
Concentrated Disadvantage	0.000	1.000	-1.577	2.780	36
Instability	0.000	1.000	-1.614	2.296	36
Violent Crime Rate	0.158	0.129	0.020	0.602	36

The Dependent Variable

The *high violence complex* measure reflects apartment complexes that experienced nine or more calls for service to the police involving violent crimes. Table 30 provides a summary of this measure. The *high violence complex* measure was dichotomous and was coded as yes if the complex had nine or more calls for service or no if the complex had eight or less violent calls for service.

Table 30: Descriptive Statistics: Dependent Variable

<i>Variable Name</i>	<i>Mean</i>	<i>SD</i>	<i>Minimum</i>	<i>Maximum</i>	<i>N</i>
High Violence Complex					
0 = 8 or less calls for service	0.059	0.236	0	1	994
1 = 9 or more calls for service					

Research Findings: Apartment Violence

Recall that our study objectives included an examination of how violence varied across apartment complexes, and also how apartment-related violence was non-randomly distributed across neighborhoods. In addition to examining these multilevel sources of variation in violence,

we were also interested in exploring the extent to which management-level correlates of apartment violence might vary across neighborhoods. To address these objectives, we estimated a series of hierarchical logistic regression models of “high violence” across apartment complexes nested within Cincinnati neighborhood groups.¹⁵

The first step in our multilevel analysis of “high violence” was a simple intercept-only (unconditional) model in which variation in violence at both the apartment complex and neighborhood levels was observed. The results are shown in Table 31. The statistically significant level-2 variance component suggests that “high violence” does indeed vary significantly across our level-2 units of analysis (neighborhoods), thus justifying further examination of apartment complex violence in contextual models.

Table 31: Level-1 and Level-2 Variance Components, Unconditional Hierarchical Logistic Regression Model of High Violence

	<i>Variance</i>	<i>SD</i>	χ^2
Level-2 (τ)	1.454	1.206	166.38*
Level-1r (σ^2)	0.682	0.826	

* $p < .05$

With significant cross-neighborhood variation in apartment violence established, we thus proceeded to build upon this unconditional model by adding, first, theoretically-linked clusters of complex-level variables, followed by inclusion of key community-level characteristics.

However, estimating cross-neighborhood variation in mean violence and the predictors thereof with data from a relatively small number of neighborhood contexts can cause convergence

¹⁵ Grouping of neighborhoods is discussed above (see Sampling Design, page 69 above). For this analysis, it was necessary to combine create three new neighborhood groups in order to have enough cases per aggregate. Pleasant Ridge and Kennedy Heights were combined into a single neighborhood group. Roselawn and Bond Hill were combined as well. Finally, Clifton, University Heights, and Fairview were combined to form one neighborhood group for the purposes of the multi-level analysis.

problems. Hence, we conducted our multilevel analysis in distinct stages, focusing on theoretically-linked clusters of complex-level variables at each unique stage. We proceeded with this analysis, first, using clusters of variables from our site observations of apartment complexes. We then conducted similar analyses on clusters of variables from our survey of apartment owners. As such, no single analysis presented below presents effects net of all possible controls. Nonetheless, we see this analysis as an important first-step in understanding whether and how “high violence” varies not only across complexes but also across the community contexts in which those complexes are situated.

Analysis of Site Observation Data

The first cluster of complex-level variables examined were those related to the accessibility of the complex, as determined by our site observations. More specifically, we estimated a random-coefficients regression model including variables tapping whether the complex was located on a corner lot, the level of unit accessibility, the level of complex accessibility, the security of the complex, whether there was an alley bordering the complex, and the number of entranceways into the complex of the complex. In estimating the effects of these individual-level, access-related variables, we specified the intercept (mean high violence) as random across neighborhoods. We also checked each individual-level slope for cross-neighborhood variation. Any slopes showing significant level-2 variance were specified as random in a final individual-level model, with all others specified as fixed. The results from this estimation procedure is depicted in Model 1 in Table 32. Next, in order to examine individual-level effects net of neighborhood-level contextual variables, key community characteristics were added to the model. In particular, we focused on neighborhood-level concentrated disadvantage, neighborhood-level residential instability, and neighborhood rate of violent crime. The results

from this final model, including access-related complex-level variables in addition to neighborhood-level variables, are provided in Model 2 of Table 32.

Table 32: Random-Coefficient Logistic Regression Models of High Violence: Accessibility Cluster

<i>Fixed Effect</i>	<i>Model 1</i>			<i>Model 2</i>		
	<i>Coefficient</i>	<i>SE</i>	<i>OR</i>	<i>Coefficient</i>	<i>SE</i>	<i>OR</i>
Intercept (mean high violence)	-2.504*	0.124	0.082	-2.597*	0.112	0.075
Corner Lot	0.568*	0.156	1.764	0.581*	0.170	1.788
Unit Access	-0.190	0.216	0.827	-0.214	0.233	0.808
Complex Access	-0.262*	0.106	0.769	-0.213	0.136	0.808
Secure Complex	-0.342	0.302	0.710	-0.416	0.280	0.659
Alley	-0.150	0.340	0.861	-0.200	0.292	0.818
Number of Entrances	0.067	0.117	1.070	0.076	0.124	1.079
Concentrated Disadvantage	-	-	-	0.337*	0.154	1.401
Instability	-	-	-	0.196	0.133	1.217
Violent Crime Rate	-	-	-	1.798	0.945	6.040
<i>Random Effect</i>	<i>Variance</i>	<i>SD</i>	χ^2	<i>Variance</i>	<i>SD</i>	χ^2
Intercept, level-2	1.985	1.409	182.63*	1.639	1.280	117.57*
Number of entrances, level-2	1.220	1.104	49.65*	1.250	1.118	47.72*
Level-1 Error	0.569	0.754		0.585	0.765	

* p < .05

Results from this final specification indicate that just one complex-level access variable was significantly related to high violence, net of neighborhood contextual characteristics. In particular, being located on a corner lot was positively related to odds of high violence at the complex, controlling for neighborhood factors. The odds ratio associated with the coefficient for “corner lot” suggests that the odds of high violence were 1.79 times greater for complexes with a corner location. This finding is consistent with expectations that corner properties are more accessible and will, therefore, produce more opportunity for violence. In terms of neighborhood-level effects, findings from Table 32 show that concentrated disadvantage is, as expected,

significantly, positively related to odds of high violence. More specifically, odds of high violence increase by approximately 40 percent per each increment increase in concentrated disadvantage. Another telling indication of the importance of neighborhood context in understanding apartment complex violence is the noted (nearly 20 percent) decline in level-2 variation in violence upon including neighborhood predictors.

Results from Table 32 also indicate that while the number of entrances to the complex is unrelated to high violence on average, this effect is significantly variable across communities (as suggested by the significant variance component in the random-effect portion of the table). In order to determine whether any of this cross-neighborhood variation in the effect of number of entrances on high violence could be explained by community characteristics, we examined supplemental hierarchical logistic regression models nearly identical to Model 2 in Table 32, but with cross-level interactions between “number of entrances” and each of the three neighborhood-level variables also included. The interaction effects emerging from these supplemental analyses are presented in Table 33 below. These results indicate that none of the interaction terms examined were significant. Therefore, we can say that the effect of number of entrance on violence is variable across Cincinnati neighborhoods, but none of the contextual characteristics of neighborhoods we examined are able to adequately explain this variability.

Table 33: Cross-level Interactions: Accessibility Cluster

<i>Apartment Level</i>			
<i>Number of Entrances</i>			
<i>Neighborhood Level</i>	<i>Coefficient</i>	<i>SE</i>	<i>OR</i>
Concentrated Disadvantage	0.061	0.141	1.063
Instability	-0.032	0.065	0.968
Violent Crime Rate	-0.170	0.528	0.844

* p < .05

In the next stage of analysis, we estimated comparable models to those presented above for a second cluster of apartment complex-level variables. The second cluster of variables was focused on traffic density in and around the complex. In particular, drawing upon data from our site observations, we estimated the effects of whether there was a bus stop near the complex (within one block), a measure of traffic as indicated by the mean street direction across all boundary streets (with two-way presumed to create more traffic than one-way), and whether there was a traffic light on a perimeter street (in plain sight from grounds of complex). We estimated these effects first without (Model 1, Table 34) and then with (Model 2, Table 34) key neighborhood-level characteristics controlled. In addition, mean high violence was specified as random at level 2, as were any significantly variable slope coefficients.

Table 34: Random-Coefficient Logistic Regression Models of High Violence Complexes: Traffic Cluster

<i>Fixed Effect</i>	<i>Model 1</i>			<i>Model 2</i>		
	<i>Coefficient</i>	<i>SE</i>	<i>OR</i>	<i>Coefficient</i>	<i>SE</i>	<i>OR</i>
Intercept (mean high violence)	-2.553*	0.105	0.078	-2.605*	0.91	0.074
Bus Stop	0.322*	0.089	1.380	0.334*	0.092	1.396
Street Direction	-0.462	0.259	0.630	-0.364	0.205	0.695
Traffic Light	-0.030	0.236	0.970	-0.006	0.251	0.994
Concentrated Disadvantage	-	-	-	0.428*	0.122	1.534
Instability	-	-	-	0.212*	0.096	1.236
Violent Crime Rate	-	-	-	1.151	0.788	3.161
Random Effect	Variance	SD	χ^2	Variance	SD	χ^2
Intercept, level-2	1.671	1.293	95.16*	1.438	1.199	58.31*
Traffic Light, level-2	4.855	2.203	41.83*	5.954	2.440	39.36*
Level-1 Error	0.519	0.720		0.525	0.724	

* p < .05

Only one of the three traffic-related variables was significantly related to odds of high violence net of community-level controls. More specifically, having a bus stop near the complex

increased odd of high violence nearly 40 percent. This finding is consistent with expectations, as bus stops were presumed to generate traffic, thus exposing nearby places to potential offenders. Similar to the models presented earlier, concentrated disadvantage exhibited a strong contextual effect on odds of high violence. Neighborhood-level residential instability was also significantly and positively related to odds of high-violence in Model 2 of Table 34. Controlling for neighborhood-level disadvantage, instability, and violent crime reduced the cross-neighborhood variation in high violence at apartments by nearly 15 percent.

Analysis of the traffic cluster of variables also indicated that the effect of having a traffic light near the complex on odds of high violence at the complex was significantly different across neighborhoods (see random-effects portion of Table 34). Therefore, we examined the extent to which “traffic light” interacted with neighborhood-level variables in estimating the likelihood of apartment-related high violence. These interaction effects are depicted in Table 35. As can be seen, there was a significant interaction between “traffic light” and concentrated disadvantage. This interaction effect suggests that the negative (main) effect of having a traffic light depicted in Table 35 is weakened as concentrated disadvantage increases. In fact, in the most disadvantaged communities, the effect of having a traffic light nearby is positive. Such findings suggest that some indicators of traffic density -- presumed to increase opportunity for violence -- may be innocuous for most apartment complexes, yet these same indicators may have particularly harmful crime-related consequences when in disadvantaged neighborhoods.

Table 35: Cross-level Interactions: Traffic Cluster

<i>Apartment Level</i>			
<i>Traffic Light</i>			
<i>Neighborhood Level</i>	<i>Coefficient</i>	<i>SE</i>	<i>OR</i>
Concentrated Disadvantage	.671*	.201	1.955
Instability	-.113	.157	.893
Violent Crime Rate	-1.287	2.885	.276

* p < .05

The next stage of the analysis of high violence at Cincinnati apartment complexes involved examination of variables obtained from our site observations that were related to the exterior image and upkeep of the complex. For this stage of the analysis, we included five complex level variables: a minor incivilities index, a severe incivilities index, presence of loitering, a “signage” index, and the number of overhead street lights on the complex’s boundary streets. As with previous analyses, effects of these complex-level variables were estimated, first, without neighborhood-level control variables (Model 1, Table 36). In a final model (Model 2, Table 36), these effects are net of neighborhood-level characteristics.

Table 36: Random-Coefficient Logistic Regression Models of High Violence Complexes: Image Cluster

<i>Fixed Effect</i>	<i>Model 1</i>			<i>Model 2</i>		
	<i>Coefficient</i>	<i>SE</i>	<i>OR</i>	<i>Coefficient</i>	<i>SE</i>	<i>OR</i>
Intercept (mean high violence)	-1.737*	0.079	0.176	-1.738*	0.065	0.176
Incivilities	0.073	0.076	1.075	0.073	0.073	1.076
Severe Incivilities	-0.038	0.059	0.963	-0.028	0.057	0.973
Loiter	0.755*	0.275	2.128	0.671*	0.259	1.957
Signage	0.176*	0.41	1.192	0.186*	0.41	1.204
Street Light	0.013	0.035	1.013	0.009	0.030	1.009
Concentrated Disadvantage	-	-	-	0.035	0.133	1.036
Instability	-	-	-	0.175	0.172	1.191
Violent Crime Rate	-	-	-	0.643	0.941	1.902
<i>Random Effect</i>	<i>Variance</i>	<i>SD</i>	χ^2	<i>Variance</i>	<i>SD</i>	χ^2
Intercept, level-2	3.253	1.804	194.07*	2.379	1.542	161.50*
Incivilities, level-2	2.772	1.665	100.25*	4.166	2.041	100.52*
Severe Incivilities, level-2	2.081	1.443	72.25*	2.336	1.528	73.48*
Loiter, level-2	16.031	4.004	83.11*	15.767	3.971	85.83*
Signage, level-2	0.362	0.602	59.13*	0.409	0.639	69.26
Street Light, level-2	0.270	0.520	51.72*	0.187	0.433	50.34
Level-1 Error	0.281	0.530		0.282	0.531	

* p < .05

Results displayed in Table 36 show that two image-related, complex-level variables displayed significant effects in estimating high violence. As expected, presence of loitering increased the odds of high violence. Contrary to expectations, however, signage also was positively related to the odds of high violence. Another interesting finding to emerge from the analyses of image-related variables is the non-significance of all neighborhood-level variables. Concentrated disadvantage had shown relatively strong effects on odds of high violence in the two previous stages of our analysis of site observation data. However, findings from Table 36 indicate that, net of complex-level image, neighborhood-level concentrated disadvantage does

not have a significant effect. Finally, our analyses in Table 36 show that *all five* complex-level image variables had significantly-variable slope coefficients. In other words, our models indicate that the effects of minor incivilities, severe incivilities, loitering, signage and street lighting are variable across neighborhood settings. In order to try to account for these variable effects, cross-level interactions were estimated, allowing us to explore how the effects of each of the image variables on violence might be conditioned by neighborhood levels of disadvantage, instability or violent crime. These interactions are displayed in Table 37.

Table 37: Cross-level Interactions: Image Cluster

Neighborhood Level	Apartment Level					
	Incivilities			Severe Incivilities		
	Coefficient	SE	OR	Coefficient	SE	OR
Concentrated Disadvantage	-0.162*	0.055	0.850	-0.071	0.054	0.932
Instability	-0.010	0.046	0.990	-0.015	0.068	0.985
Violent Crime Rate	-0.825*	0.287	0.438	-0.290	0.636	0.749
Neighborhood Level	Signage			Street Light		
	Coefficient	SE	OR	Coefficient	SE	OR
	Concentrated Disadvantage	0.098*	0.040	1.103	-0.053	0.037
Instability	0.045	0.032	1.046	0.023	0.051	1.023
Violent Crime Rate	0.244	0.238	1.276	0.424	0.418	1.527
Neighborhood Level	Loiter					
	Coefficient	SE	OR			
	Concentrated Disadvantage	0.131	0.265	1.140		
Instability	-0.850	2.541	0.428			
Violent Crime Rate	0.055	0.327	1.057			

* p < .05

Of the fifteen interaction effects depicted in Table 37, only three are statistically significant. Our indicator of minor incivilities interacts (negatively) with both neighborhood-level concentrated disadvantage and neighborhood-level violent crime. These interactions indicate that overall positive (main) effect of minor incivilities on apartment violence is

tempered as concentrated disadvantage and area violent crime increase. Complex-level disorder may simply matter less in terms of providing opportunity for crime in neighborhoods where the broader conditions suggest plentiful opportunity. In contrast, a significant interaction between signage and concentrated disadvantage indicates that signage is more positively related to apartment violence as neighborhood-level concentrated disadvantage increases.

Analysis of Apartment Manager Survey Data

All of the analyses of apartment-related violence presented up to this point have utilized complex-level measures that come from our site observations of 994 Cincinnati apartment complexes. The survey of the owners of those complexes yielded many fewer cases (N=307). Rather than combine the two sources of data and lose many valuable cases for which we had site observation data but no survey data, we elected to conduct analyses separately on measures from the management survey of owners. Thus, the final three stages of our examination of complex and neighborhood sources of variation in apartment violence are based upon complex-level measures derived from the management survey only. Also, due to the small number of completed surveys per neighborhood, we necessarily simplified our estimation of multilevel models of “high violence” by estimating models in which only the intercept (mean neighborhood high violence) was allowed to vary across neighborhoods. All slope coefficients were “fixed,” as cross-neighborhood slope variance could not be reliably estimated.

Just as in the case of analyses based on data from site observations, theoretically-linked clusters of variables are examined in separate stages. The first set of factors we examined from the management survey related to the financial and residential stability of the complex. Specifically, we utilized an owner-reported measure of the financial status of the complex, an owner-reported measure of the level of delinquent rent payment at the complex, an owner-

reported level of apartment vacancy within the complex, an owner-reported ordinal measure of the percentage of tenants who utilized “Section 8” housing vouchers, and an owner-reported assessment of the percentage of tenants living in the complex for two or more years. The results of the analyses of this cluster of variables in presented in Table 38.

Table 38: Random-Intercept Logistic Regression Models of High Violence Complexes: Financial and Residential Stability Cluster

<i>Fixed Effect</i>	<i>Model 1</i>			<i>Model 2</i>		
	<i>Coefficient</i>	<i>SE</i>	<i>OR</i>	<i>Coefficient</i>	<i>SE</i>	<i>OR</i>
Intercept (mean high violence)	-3.101*	0.233	0.045	-3.235*	0.242	0.039
Financial Status	-0.037	0.267	0.964	-0.021	0.287	0.979
Delinquent Rent	0.821*	0.187	2.274	0.876*	0.190	2.401
Vacant	-0.109	0.135	0.897	-0.146	0.152	0.864
Section 8	0.532*	0.192	1.702	0.553*	0.180	1.738
Tenure	0.090	0.118	1.095	0.109	0.114	1.115
Concentrated Disadvantage	-	-	-	-0.093	0.340	0.911
Instability	-	-	-	0.527	0.277	1.694
Violent Crime Rate	-	-	-	0.715	1.935	2.045

<i>Random Effect</i>	<i>Variance</i>	<i>SD</i>	χ^2	<i>Variance</i>	<i>SD</i>	χ^2
Intercept, level-2	3.629	1.905	146.57*	3.819	1.954	122.72*
Level-1 Error	0.431	0.656		0.460	0.678	

* p < .05

Results in Table 38 show that two of the financial/residential stability measures were significant in predicting high violence. As rate of delinquent rents and level of section 8 tenants increased, so did odds of violent crime at the complex. Controlling for complex-level financial and residential status yielded non-significant effects for all neighborhood-level variables.

We next examined a cluster of variables from our survey of owners that measure owner/management experience and presence (at the complex). Three variables comprise this cluster: a measure of the frequency with which the owner visits the complex, an ordinal-scale measure of the number of other rental properties owned by the respondent, and a dichotomous measure indicating presence of a rental/management office on the complex grounds. Results are reported in Table 39. Higher levels of violence tended to occur at places where the owner reported higher levels of rental property ownership. As such, owner “experience” did not seem to benefit the complex. Instead, we speculate that several issues may lie behind the *positive* relationship between rates of ownership and high violence. First, high-volume owners might be spread too thin, thus neglecting some of their properties, resulting in crime-prone places. In addition, the types of apartments that are owned in high numbers by single owners are probably some of the most affordable properties, with crime-prone conditions often accompanying the attractive price tags. Having a rental office on the complex was also associated with higher violence. While we had originally conceived of this measure as an indicator of management presence on the complex, hindsight suggests to us that it may be tapping a particular type of apartment complex. In general, management offices tended to be on-site in the larger, high-rise apartment buildings – buildings that we would expect to be prone to higher violence.

Table 39: Random-Intercept Logistic Regression Models of High Violence Complexes: Management Experience and Presence Cluster

<i>Fixed Effect</i>	<i>Model 1</i>			<i>Model 2</i>		
	<i>Coefficient</i>	<i>SE</i>	<i>OR</i>	<i>Coefficient</i>	<i>SE</i>	<i>OR</i>
Intercept (mean high violence)	-3.131*	0.344	0.044	-3.297*	0.218	0.037
Frequency of Visits	0.258	0.269	1.294	0.268	0.286	1.308
Own Other Apts. in Cincinnati	0.438*	0.106	1.550	0.430*	0.112	1.538
Rental Office	1.640*	0.532	5.155	1.675*	0.570	5.338
Concentrated Disadvantage	-	-	-	0.074	0.308	1.077
Instability	-	-	-	0.054	0.323	1.056
Violent Crime Rate	-	-	-	4.100	2.579	60.342

<i>Random Effect</i>	<i>Variance</i>	<i>SD</i>	χ^2	<i>Variance</i>	<i>SD</i>	χ^2
Intercept, level-2	3.622	1.903	235.05*	3.733	1.932	179.10*
Level-1 Error	0.291	0.540		0.296	0.544	

* p < .05

The final stage of our multilevel, multivariate analysis of violence in apartments consisted of examining variables that measured security-related decisions/practices of apartment managers. We included, more specifically, dichotomous measures indicating 1) whether owners conducted financial background checks on applicants, 2) whether they conducted criminal background checks on applicants, 3) whether they contacted previous landlords of applicants, and 4) whether they served any evictions. Findings focusing on these complex-level variables, in combination with neighborhood contextual variables, are provided in Table 40.

Table 40: Random-Intercept Logistic Regression Models of High Violence Complexes: Checks and Security Cluster

<i>Fixed Effect</i>	<i>Model 1</i>			<i>Model 2</i>		
	<i>Coefficient</i>	<i>SE</i>	<i>OR</i>	<i>Coefficient</i>	<i>SE</i>	<i>OR</i>
Intercept (mean high violence)	-3.197*	0.346	0.041	-3.278*	0.233	0.038
Financial Background	-0.295	0.457	0.745	-0.308	0.437	0.735
Criminal Background	1.861*	0.595	6.428	1.849*	0.642	6.356
Previous Landlord Contacted	0.058	0.493	1.060	-0.006	0.481	0.994
Number of Evictions Served	0.090*	0.037	1.094	0.088*	0.039	1.092
Concentrated Disadvantage	-	-	-	0.047	0.265	1.048
Instability	-	-	-	0.095	0.316	1.100
Violent Crime Rate	-	-	-	2.933	2.592	18.775

<i>Random Effect</i>	<i>Variance</i>	<i>SD</i>	χ^2	<i>Variance</i>	<i>SD</i>	χ^2
Intercept, level-2	2.434	1.560	154.80*	2.655	1.629	125.49*
Level-1 Error	0.342	0.585		0.342	0.585	

* p < .05

The significant effects emerging from the analysis presented in Table 40 are generally contrary to expectations. Two of the security-related variables were significantly *positively* related to high violence at apartments – namely, criminal background checks and serving evictions. While we assumed these management practices would result in lower violence, we suspect that the positive effects shown here might be the result of security practices emerging from high violence (rather than temporally preceding high violence).

Summary

The preceding analyses indicate that management decisions can be important in understanding violence at apartment complexes. Several types of management decisions appear important. First, our analysis provided evidence that decisions in terms of the physical characteristics of the properties owners choose to buy can have implications for violence. In particular, our findings highlight a couple of key risk factors in this regard:

- apartment complexes located on corner lots were more violence-prone places; and
- apartment complexes located near bus stops were more violence-prone places.

In addition, some management decisions regarding the upkeep, maintenance, and supervision of their properties may be key in predicting levels of violence on the properties. Our findings highlighted one specific finding consistent with this idea:

- apartment complexes with presence of loitering were more violence-prone places.

Finally, management decisions regarding the financial standing of tenants to whom they rent appear important in understanding and preventing violence. In particular, our findings indicate the following:

- the rate of tenants delinquent on rent is positively associated with apartment violence;
and
- the rate of tenants paying with Section 8 vouchers is positively associated with apartment violence.

Thus, there is evidence that management decisions in a variety of domains can affect violence at apartments. That being said, there is also evidence that these individual decisions don't have the same implications across all neighborhood contexts. Our contextual analysis,

including exploration of how complex-level effects on violence varied according to neighborhood context yielded the following generalizations:

- Management decisions regarding the location of their apartments in terms of traffic do not necessarily yield the same costs/benefits across neighborhood contexts. We found evidence that apartment complexes located on high-traffic streets (as indicated by presence of a street light) are only at risk in neighborhoods with the most concentrated disadvantage.
- Management decisions regarding the maintenance of physical incivilities do not necessarily yield the same costs/benefits across neighborhood contexts. We found evidence that incivilities were most harmful to complexes located in neighborhoods with less disadvantage and less overall crime.

Violence at places: Lessons from bars and apartments

Introduction

In previous chapters we have described our findings from the analysis of data on violence in bars and apartments. In this chapter we will look at more general implications. As such, this chapter is far more speculative and at times goes beyond the data. The first section describes general lessons we can draw from the specific bar and apartment findings. The second section describes implications for conducting research on places and place management. The concluding section offers general policy implications from the research, in the context of place research already in the literature.

General findings

When we step back from the specifics of which variable is associated with other variables for bars and apartments, we can see a broader set of findings. Four general findings from this study may have broad implication for the relationships among places, neighborhoods, and violence. We offer these conjectures as fodder for future studies.

Distribution of Violence

Violence is highly concentrated in a few bars and a few apartment complexes. This is consistent with the risky facility hypothesis of Eck, Clarke, and Guerette (2007). This finding is not surprising given the ubiquity of the concentration of crime across a host of dimensions. In fact, it would be surprising to find little or no concentration. Nevertheless, it is important because of the common misconception that some types of facilities, such as bars, are inherently

violence prone. This is clearly not the case. And it calls into question earlier research that suggests that bars have a common influence on their immediate surroundings (Roncek, 1981; Roncek and Bell, 1981; Roncek and Pravatiner, 1989; Roncek and Maier, 1991). Roncek's thesis has been widely cited, but it needs to be reinvestigated in light of the highly skewed distribution of crime at bars. It is plausible that the association Roncek and colleagues found between bars and crime on city blocks is due to a) a few outlier high crime bars; or b) uncontrolled confounders. Our analysis focused on violence at the place, rather than violence immediately surrounding the place, so this may account for the differences between our study and Roncek's various finding. Nevertheless, crime is highly skewed in so many domains, it would be surprising not to find the same skewed distributions surrounding places that we find within them.

Neighborhood Context

In this study we examined three alternative hypotheses describing the relationship between places and their neighborhood context: 1) Neighborhood characteristics determine violence at places; 2) Place violence is unaffected by neighborhood context; and, 3) Place violence is partially determined by neighborhood context. Despite the differences in place type, data collection methods, survey response rates, and statistical methods used our results were reasonably consistent. The third hypothesis appears to be a better explanation than either of the other two hypotheses.

The evidence is inconsistent with the first hypothesis for both bars and apartment. If this hypothesis were true, then violent bars should cluster together in the same neighborhoods and bars with little or no violence should cluster together in other neighborhoods. We did not see this. In fact, violent bars were collocated near other bars and in the same neighborhoods. If this

hypothesis is true for apartments, then we should have found that neighborhood variation should exclusively drive violence in apartments. In fact, what we found was that neighborhood characteristics were inconsistently associated with violence, and place characteristics were often associated with violence.

The evidence is inconsistent or inconclusive regarding the second hypothesis. The spatial distribution and number of bars in Cincinnati did not allow us to eliminate the hypothesis that neighborhoods have some influence on bar violence. In fact, bars cluster together. This suggests that neighborhoods at least influence bar location. So we are suspicious of the “place only” perspective of the second hypothesis concerning bars. If neighborhoods have no influence on apartment violence, we would find that only place characteristics would be statistically associated with apartment complex violence. While place does matter, our results suggest that neighborhoods may have some influence on apartment violence.

This leaves us with the third hypothesis: place violence is both the result of place characteristics and the neighborhood context of the place. This result may be due to a number of possibilities: places may influence context at one level, and context influence places at another level, for example, or it may be that context influences the strength of place effects. Unfortunately, we cannot apportion this influence between place and context. We can eliminate the extremes (only place or only context) but we cannot definitively conclude that place is more important or less important than context. And we should be careful to avoid interpreting this uncertainty as implying that the places and context are equally important. Further, we should not leap to the conclusion that the relative importance of place and context is stable across types of places (e.g., bars, apartments, or other types of facilities), or across cities (e.g., Cincinnati, Boston, Austin, or other), or over time. Local economic conditions, state and local laws and

regulations, land use policies, and a host of other factors are likely to influence the relative importance of place and context.

Our best estimate is that places and their contexts are loosely coupled. The looseness or tightness of this coupling will probably vary by area (city, county, and metropolitan area), over time, facility type, and crime type. This provides a wealth of research opportunities here, but it also leaves policy makers and practitioners with some uncertainty.

Place Features

Place features are associated with place violence. In particular, we found evidence consistent with the hypothesis place management influences violence at both apartments and bars. Unfortunately, we were unable to disentangle the influence of the large number of possible place management characteristics. And though a few place variables stand out as being significantly associated with violence, we cannot pin down the temporal order of the association. Do these variables cause violence or reduce violence, or does violence cause an increase in these variables? Cross-sectional studies such as this are notoriously poor at establishing temporal order, so this limitation is not surprising.

We should comment on a seeming contradiction between our findings and findings from studies of convenience stores. Convenience stores have been the subject of considerable research. There are relatively consistent findings that place specific features influence robbery and other crime risks (Bellamy, 1996; Faulkner, Landsittel, and Hendricks, 2001; Hunter and Jeffrey, 1991; LaVigne, 1994), though Calder and Bauer (1992) present evidence that environmental factors may be more critical than place factors. Why might there be reasonably strong relationships between place characteristics and crime in convenience stores, but weaker evidence for apartments and bars? One obvious reason may be differences in methods. Another

may be that the convenience store research over estimates place effects, as Calder and Bauer (1992) suggest. But there are other possibilities that need to be stated.

First, convenience stores are far more homogeneous than either bars or apartment complexes. They vary less in terms of location (convenience stores are almost always on major streets, and often on corners, where bars and apartment are in a greater variety of contexts). Convenience stores are also more homogeneous in terms of their interior layout, size, and along other dimensions than either bars or apartments. Second, the range of behaviors permissible in bars and apartments is greater than in convenience stores. Third, convenience stores are highly likely to be part of a national chain that standardizes employee behavior, physical characteristics, and other factors. This is much less likely for apartments or bars. Finally, as a result of the above, convenience stores may be far more decoupled from their context than either bars or apartment buildings. All of these differences make convenience stores far simpler than bars or apartments, and could explain why place feature associations with crime are more obvious in convenience stores. In short, the simpler the place and the more decoupled from its environment, the easier it will be to associate place characteristics with crime.

These sorts of variations among place types (i.e., facilities), the skewed distribution of violence, the loose coupling of neighborhood context, and the difficulty at disentangling place effects on crime, suggests we need to look at place management differently.

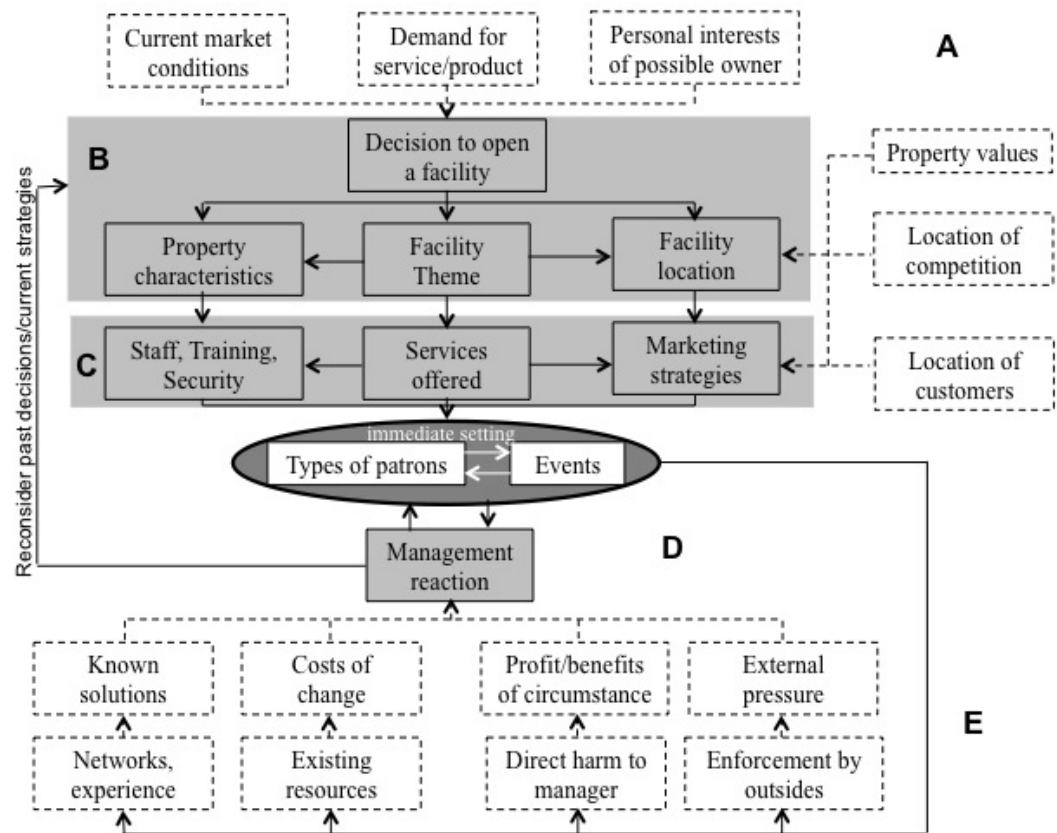
Place Dynamics

In her dissertation, Tamara Madensen (2007) proposed a dynamic framework for understanding place management. She based the model on qualitative interviews of bar managers during data collection for this study, and then generalized concepts regarding bars to all places. Figure 13 graphically depicts Madensen's model. Crime production is the result of a

larger process wherein managers make decisions in different time frames. Further, crime production is only one of many things produced. Figure 13 has five groups of factors (marked A through E).

A. Background. The dashed boxes along top and right side describe background factors for place management. Many of these can be influenced by neighborhood context. We include the interests of the possible owner, because these come prior to subsequent decisions. In the long run these interests will be influenced by the performance of the place, but for simplicity we ignore this form of feedback.

Figure 13: Place management



Adapted from: Madensen, 2007

B. Strategic Decisions. The boxes in this shaded region describe early, strategic, management decisions. These decisions, once taken, cannot be rapidly or easily undone. Strategic decisions are influenced by the outside factors described in A.

C. Intermediate Actions. These boxes describe intermediate term management actions. Unlike those in B, these can be changed relatively quickly, though not instantly and not without costs. The most important outside influence is the location of customers, and this influence marketing. Other outside factors are indirect.

D. Short Term Actions. The interactions of patrons and their environment create events and the patrons respond to these events. Most events are good or benign (e.g., bar patrons start dancing and ordering more drinks; apartment dwellers get a good nights sleep). Other events will be annoying (e.g., apartment residents are awoken early by drunks coming home from the bar). A few events will be crimes (e.g., two patrons get into a fight and the bar tender throws them out). Management reactions are also quick. Management reaction is not only influenced by the patrons and events, but a host of other factors (shown in E). Over time management may reconsider decisions made in B and C.

E. Operational Factors. The factors in dashed boxes along the bottom describe intermediate background influence on management decisions. The events influence recourse, draw (or fail to) the attention of regulators, enhance the manager's relationships with other managers, and so forth. They create a rough cost-benefit context for management reactions in D. When the place is operated to earn the owner a profit, profits may have a very large influence on management reaction. In other types of places, other influences may dominate.

This model helps explain our basic findings. First, highly skewed distributions such as we found with regard to violence at places are often the result of processes with feedback

mechanisms (Eck, Clarke, and Guerette, 2007). We would expect place managers to make decisions on the fly to reduce crime, but some managers will be more effective than others. This creates a sorting process. Those managers that can consistently respond appropriately keep their place in the large group of low crime locations. Managers that fail to respond appropriately (taking advantage of positive events and not making changes following negative events) shift their location toward the small group of high crime locations. This can reduce their resources and their ability to reverse their direction. If managers consistently fail to respond appropriately, then the location ends up in the tail of the distribution with the highest crime places. In feedback systems, small differences can accumulate causing two entities that start with similar attributes to have very different trajectories (Miller and Page, 2007; Schroeder, 1991). In this case, two apartment complexes near each other and catering to the same clientele could over time evolve to the point where one has little crime and the other has much.

Second, Madensen's framework explains the loose coupling between context and crime at places. Managers seek to insulate their places from contextual factors that get in the way of place operations and take advantage of contextual factors that enhance their place. Managers differentially apply advertising, for example. Bar owners making a good profit from local clientele who do not create trouble may choose not to spend money on advertising. Here the local context helps the bar owner. An owner of a bar in a neighborhood with few customers, or customers who the management believes are troublesome, may advertise for non-local customers. This is likely to be accompanied by enticements for outsiders to come to the bar. If successful, these actions may insulate the bar from the neighborhood's influence. Not all such efforts will be successful. Thus, in a population of bars, some will be more subject to contextual influences than others. This framework can be applied to all places.

Links between places and neighborhood may also be a matter of the time frame under consideration. Using Madensen's model we anticipate that management decisions regarding when and where to locate the place are influenced by neighborhood context, with the causal direction flowing from the context to the place. This decision is difficult to undo. Once established, managers are likely to insulate the location from negative influences, as described above. However, in short time-periods (the central part of the model) the place is generating events which may influence the context. The causal direction switches. Thus, given a place-context relationship works in both causal directions, depending on where the place is located in its historical evolution, in cross-sectional studies such as ours, the average causal effects over all places may cancel each other out.

Third, the framework shows why cross sectional studies are unlikely to reveal a few consistently powerful place effects in a population or sample of facilities. That is because managers, having different objectives and working in different contexts, will apply different approaches to regulate conduct make the place successful. We might call this the "skinned cat" hypothesis: there are many ways to run a successful place. The place management features useful in one location may conflict with the goals of the manager in another, so the owners use a different approach. Additionally, the management decisions are not implemented individually, but are part of a set of practices. Consequently, no single physical or social attribute of a place will consistently be associated with crime. With the right other set of factors, a place condition might not create crime opportunities. But without them, or with other factors, the same condition might facilitate crime.

Cross-sectional studies will have difficulty testing this model because it does not specify the temporal order: disorder causes management decisions which in turn influence disorder.

Positive feedback loops will result in largely crime free places, or in places that are either go out of business or have a great deal of crime. Crime results in management response that drives crime down and increases profits that allow more effective management, even less crime, and even higher profits. Or crime drives out customers, reducing management capability to regulate crime, resulting in fewer customers and more crime. Negative feedback would result in crime oscillations: crime provokes management response, which drives crime down; with low crime management goes back to less expensive practices, which allows crime to return; this repeats.

Another reason cross-sectional studies, such as this, will have difficulty parsing specific place and neighborhood influences on crime is that cross-sectional studies assume that the processes that create the values of the variables being studied are stable; have reached an equilibrium. However, this assumption is probably not valid. In our study we found that some bars and apartment complexes that were registered as operating in data bases were found to be closed when we visited them. In fact, many of the bars in the Over-the-Rhine neighborhood that we studied, are now closed. Further, new businesses opened after we began our study and change of ownership is common. The feedback processes internal to the place, described in the model, does not predict that managers will settle on a stable practices. Bar managers, in particular, changed their practices often, though this may be highly variable. So while we cannot rule out stability for any specific place, in a population of similar places – facilities – we cannot assume that an equilibrium has developed. And when the processes are not in equilibrium one cannot discern from cross-sectional correlations which factors are influencing which other factors.

While this framework explains the main results of this study, the study is not strong evidence in support of the framework. First, the framework was built in the course of the study

so in some respects it might be “fit” to the data. Second, the study design is cross-sectional and the framework is best tested with a longitudinal study. Consequently, Madensen’s model is best viewed as a useful framework that needs testing.

Implications for place research

This study provides several lessons for research on places.

Interviewing and Observing Place Managers

The response rates for interviews of managers varied considerably between bars and apartments. We were able to interview managers at over 80 of the bars in Cincinnati, but less than 25 percent of the apartment managers. The reason is simple. Bars are open to the public and a manager is always present when the place is open for business. Apartments are private residences and apartment complex properties are often restricted to residents. More importantly, few apartment complexes have managers located on site. Contacting off-site managers was difficult, and necessity of mail surveys and phones made it easier for respondents to refuse interviews. The broader lesson is that facility types will vary in difficulty of contacting managers. Facilities where the manager is often present and interacts with the public will be the easiest places to study. When managers do not interact with the public, and particularly when they are located off-site, then researchers will have much greater difficulty in getting interviews.

The ability to observe place management in action also varies across different types of places. A researcher (or anyone else) can sit in a bar and directly observe how managers behave. Though some of their actions will be in private locations, much will be in the open. Even if a researcher has unfettered access to an apartment complex, however, they will see very little management behavior. Interactions with tenants can take place over the phone (or through other

devices) and long periods will elapse without any obvious action by the owner or her designee. The broad lesson is that the pace of activities within places will make place management easier or harder to study. Places that host a limited range of activities, such as office buildings, parking garages, and apartment complexes are likely to have less management presence to observe, compared to places with more diverse and less predictable activities, such as stores, casinos, and schools.

Case Studies and Establishing Temporal Order

To understand the impact of place management on crime, and the influence of neighborhood context on place management, we will need to observe places over time. We would expect to see managers shifting management practices to achieve their objectives, address changes in their context, and to address unforeseen opportunities and impediments. An apartment complex manager may alter the physical appearance and management practices to attract higher rent paying clients when the neighborhood becomes more upscale. Sales of a bar to a new owner may result in a new theme designed to attract different customers. Place managers may band together to improve the functioning of their facilities, and this could result in a change in the neighborhood context. None of these examples can be observed through cross sectional studies, but all of these examples were described to members of the research team.

Observing places over time will require observing fewer places: instead of observing many places at one time, researchers should consider observing few places for many time periods. This will reduce the generalizability (external validity) of place studies, but it will improve researchers' abilities to draw stronger causal inferences (internal validity) due to the establishment of temporal order (Shadish, Cook, and Campbell, 2002). In the long-run, we may

learn more from many separately conducted longitudinally organized case studies, than from a few large scale cross sectional studies of places.

Management Practice and Business Networks

Understanding the influence of place management on crime may be improved by drawing on studies of businesses and marketing. Industry standards could serve as benchmarks for measuring management practices. This is a virtually untapped area that deserves greater attention.

Places are not independent. Places are networked together in a number of ways, and these are likely to influence management practices that in turn influence crime. Further, these networks may help explain the loose coupling with neighborhood context. That is, it could be that the social context of many places draws more from the social network of the managers than the spatial context of the physical and social surroundings. Here are three common network structures that maybe important.

1) Ownership. In our study we sampled apartments so that we had few complexes owned by the same owner. But in fact, apartment building ownership is highly concentrated. We estimated that about 8 percent of the apartment building owners own just over half the apartment buildings in Cincinnati (Payne and Eck, 2007). Though we do not have data for bars, we do know that there is some concentration of bar ownership as well. If one were studying retail stores, then national chains would have to be taken into account. Concentrated ownership helps standardize business practice. It also may allow owners of many properties to ignore crime in some of their locations as long as most of their properties are functioning well.

2) Franchises. Even if ownership were not concentrated, some corporations franchise places, thus creating a network of places. This too standardizes practices, insulates the place

from its surroundings, and may influence crime if standardize practices routinely provide crime opportunities or routinely block them.

3) Business Groups. A common practice among bars located in close proximity is to sponsor special events, such as pub crawls. This is just one of many forms of business groups that network facilities and places that belong to different facility types. Business improvement districts (BIDs), for example, network places in central business districts to improve commerce by increasing safety. BIDs typically are funded by special taxes on businesses in the BID area. Such networks make it possible for places to influence their context.

Place based prevention

There are seven implications for policy that stem from this study's findings.

1. Place-based crime policies should focus on extreme places, not average places. This implication comes from the skewed distribution of violence at places – found here and in every other study of places. The average amount of violence in population of facilities, such as bars, will over estimate the typical amount of violence. Rather than broad policies that apply to all facilities of a particular type, the governments should direct their anti-crime policies to the small number of high crime locations at the group.

Separating the many normally good places from the few routinely bad places has three obvious advantages. First, focused policies are more effective. The many places with little or no crime cannot reduce crime very much, so putting pressure on managers of these locations will have very little return. The few managers of properties with high crime have a very high potential for reducing crime. So this is where the crime prevention emphasis should be placed. Second, it is more efficient, as the same resources can be concentrated where they can do the

most good, or fewer resources can be used to have the same impact. Third, it is politically more attractive. Place managers are often networked, and policies that are perceived to be costly to members of the network are likely to create political pressure to blunt the policies. Isolating the few bad places allows greater cooperation with the many place managers who are doing a good job and reduces the chances of oppositional political actions. In summary, focusing on the worst places is more effective, more efficient, and more equitable than focusing on all places of a particular type.

2. Neighborhood based crime prevention efforts will need to include specific place based strategies. Neighborhood policies without place strategies may not be able to suppress crime at high crime locations. This policy implication comes from the finding that place violence is only loosely coupled with neighborhood context. This policy recommendation is implied also from the idea that place managers will try to buffer the functioning of the place from the surroundings of the place.

3. Place based prevention efforts may need to be adjusted to account for the place's context. The effectiveness of preventions implemented at places may be influenced by the context of the place. Consider security around apartment buildings. Fences and locked gates may help keep strangers out of the building in some neighborhoods, but in other neighborhoods these simple prevention measures seem to foster drug dealing (Eck, 1995).

4. Managers are important for controlling crime at places. Owners should be held accountable for persistent crime problems on their premises. And efforts to hold managers accountable do work. This implication comes not only from the findings that place variables are associated with violence in bars and apartments, but from a large body of research and evaluations.

5. Holding managers accountable for reducing crime may be easier if the neighborhood context is supportive. Though managers may buffer their places from their surroundings, these buffering activities come with a cost. If these costs can be offset by revenue, the buffering will be successful. Thus, a high crime place in a low crime area where local residents and other businesses are antagonistic to the place's crime facilitation will be easier to improve than the same place in a high crime neighborhood where residents and businesses may view the place's crime facilitation as normal. The direct evidence for this implication is weak, but the implication follows logically from the idea of loose coupling.

6. Dynamic model suggests place based efforts will be most effective when they take into account the economic and political context of places. This implication is an extension of the previous implication. It also extends the notion of context. We do not know if which context is most important – neighborhood, political, economic, or social – and this requires more research. However, we need to realize that place managers operate in multiple contexts.

7. Regulations that specify specific situational crime prevention practices may be far less effective than regulations that mandate a maximum level of crime. This implications follows from two empirical findings from bars and apartments. First, we found few situational factors that were strongly negatively related to crime. Second, the positive relationship between security and crime (suggesting security follows crime). Additionally, the place management model we have described suggests managers operate in a dynamic environment. Consequently, it makes more sense to give managers a crime ceiling which they can seek to achieve through what ever legal means they can afford and make sense in the context they are operating. This is consistent with the experimental evidence that found that giving

landlords incentives to reduce drug dealing were successful (Eck and Wartell, 1998, Mazerolle, Roehl, and Kadleck, 1998), even though specific situational measures were not prescribed. In short, property owners should be given incentives to reduce crime, but not required to achieve specific situational standards.

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Appendix I: Bar Place Manager Survey

BAR PLACE MANAGEMENT SURVEY

SURVEY INSTRUMENT
CONFIDENTIAL INFORMATION
DO NOT CIRCULATE

BAR NAME: _____

BAR ADDRESS: _____

INTERVIEWER NAME: _____

INTERVIEW DATE: _____ TIME: _____

INTERVIEW LOCATION:

PHONE

ON-SITE

OFF-SITE _____

ANY PERSONAL IDENTIFIERS OF THE RESPONDENTS,
INCLUDING NAMES AND TELEPHONE NUMBERS,
SHOULD ONLY BE WRITTEN ON THE LAST PAGE OF THIS SURVEY

PERSONAL INFORMATION MUST BE REMOVED AND SHREDDED
ONCE SURVEY IS COMPLETE

INTRODUCTION AND INFORMED CONSENT - BARS

Hi, my name is [*interviewer name*]. I'm a researcher from the University of Cincinnati. We're interviewing Cincinnati bar owners, managers, and staff about their experience with managing a business that serves alcohol. This survey is funded by the National Institute of Justice. A letter describing the details and purpose of this study was mailed to you or your business a few weeks ago. Did you receive this letter? YES NO

Our records indicate that you own or manage [*bar or restaurant's name (or if name of the business is unknown)*] a bar or restaurant that serves alcohol at [*address*]. Is this correct?
 YES, CONTINUE NO: Could you please refer me to the current owner or manager?
[WRITE NAME & NUMBER ON LAST PAGE] Thank you for your time.

Can you answer questions about the day-to-day operations of the business, or is there someone else we can contact?
 REFUSED PARTICIPATION: Thank you for your time. CAN ANSWER, CONTINUE
 SOMEONE ELSE: [WRITE NAME & NUMBER ON LAST PAGE] Thank you for your time.

The survey should only take about 20 minutes to complete. Would you be willing to participate in our study now or can we schedule an interview during a more convenient time?
 REFUSED PARTICIPATION: Thank you for your time. NOW, CONTINUE
 ANOTHER TIME: [WRITE NAME/DATE/TIME & NUMBER ON LAST PAGE - CONFIRM DATE & TIME] - Thank you for your time.

The purpose of this study is to understand how owners and managers of rental housing and businesses that serve alcohol address crime and disorder problems. You will be one of approximately 900 participants taking part in this study. You will be asked a series of questions related to your business. You will receive no direct benefit from your participation in this study, but your participation may help other business owners improve safety at their properties and assist government agencies to formulate reasonable and effective policies.

There are no foreseeable risks associated with this survey. However, you have the right to refuse to answer any question or to stop the interview at any time without penalty. Your participation is voluntary and any answers you give will be kept strictly confidential and used only for research purposes. We will remove your name and any other personal identifying information from your answers and shred this information after you have completed the survey. All completed surveys will be stored in a locked filing cabinet and shredded three years after the end of this study. The data from the study may be published; however, neither you nor your business will be identified by name. To help protect the privacy of others, we ask that you do not use the names of other employees or patrons when answering questions. By answering the following survey questions, you are giving your consent to participate in this study. May we continue?

RESPONDENT CONSENT: YES, CONTINUE NO: Thank you for your time.

If you have any other questions about this study or would like a copy of the study's findings, you may call Dr. Pamela Wilcox at the University of Cincinnati. You can also contact the Chair of the Institutional Review Board. Would you like either of their contact numbers now?

IF YES: Dr. Wilcox - (513) 556-2957; Chair of IRB - (513) 558-5784

SECTION 1: I'd like to begin by asking you a series of general questions about the ownership and location of the bar.

1. How long has [*bar name*] been in business?

NUMBER OF YEARS/MONTHS.....|_|_|YRS |_|_|MON
DON'T KNOW.....-9
REFUSED.....-8

2. How long has the bar been at this location?

NUMBER OF YEARS/MONTHS.....|_|_|YRS |_|_|MON
DON'T KNOW.....-9
REFUSED.....-8

3. [*Do you / Does the current owner*] own or lease this property?

OWN.....1
LEASE.....0
DON'T KNOW.....-9
REFUSED.....-8

4. How long [*have you / has the current owner*] owned [*bar name*]?

NUMBER OF YEARS/MONTHS.....|_|_|YRS |_|_|MON
DON'T KNOW.....-9
REFUSED.....-8

5. How many other bars [*do you / does the current owner*] own...

In Cincinnati?.....|_|_|
In other cities in Hamilton County?.....|_|_|
Elsewhere?.....|_|_|
DON'T KNOW.....-9
REFUSED.....-8

6. [Do you / Does the owner] belong to any bar- or business-owner associations?

- YES.....1
- NO.....(GO TO SECTION 2).....0
- DON'T KNOW.....(GO TO SECTION 2).....-9
- REFUSED.....(GO TO SECTION 2).....-8

7. What are the names of these associations?

SECTION 2: Next, I'd like to ask you a few questions about the bar's property.

8. In what year was the bar's building built?

- YEAR.....|_|_|_|_|
- DON'T KNOW.....-9
- REFUSED.....-8

9. What is the square footage of the bar?

- SQUARE FOOTAGE.....|_|_|_|_|
- DON'T KNOW.....-9
- REFUSED.....-8

10. What is the maximum occupancy of the bar?

- MAXIMUM OCCUPANCY.....|_|_|_|_| PERSONS
- DON'T KNOW.....-9
- REFUSED.....-8

11. Is there generally enough parking for patrons within a block of the bar?

- YES.....1
- NO.....0
- DON'T KNOW.....-9
- REFUSED.....-8

12. Since the year 2000, about how many major renovations of the interior or exterior of the bar have taken place?

- NUMBER OF RENOVATIONS.....|__|__|__|
- NO RENOVATIONS.....(GO TO Q16).....0
- DON'T KNOW.....(GO TO Q16).....-9
- REFUSED.....(GO TO Q16).....-8

13. In what month and year did the last renovation take place?

- DATE.....|__|__|MO|__|__|YR
- DON'T KNOW.....-9
- REFUSED.....-8

14. Was this an interior or exterior renovation?

- INTERIOR.....0
- EXTERIOR.....1
- BOTH.....2
- DON'T KNOW.....-9
- REFUSED.....-8

15. What renovations were made?

16. Does the bar or building have a burglar alarm system?

- YES.....1
- NO.....0
- DON'T KNOW.....-9
- REFUSED.....-8

17. Does the bar or building have an alarm that can be activated in the event of a robbery?

- YES.....1
- NO.....0
- DON'T KNOW.....-9
- REFUSED.....-8

SECTION 3: The next set of questions is about the business itself.

18. Does [*bar name*] have a specific theme or specialty? For example, it is a neighborhood bar or Irish pub?

19. Is the bar advertised...

	YES	NO	DON'T KNOW	REFUSED
A. In City Beat?	1	0	-9	-8
B. In the Cincinnati Enquirer or Post?	1	0	-9	-8
C. On television? What station? _____	1	0	-9	-8
D. On the radio? What station? _____	1	0	-9	-8
E. On the internet?	1	0	-9	-8
F. Someplace else? _____	1	0	-9	-8

20. Does the bar work with other drinking establishments to attract customers?

- YES.....1
- NO.....0
- DON'T KNOW.....-9
- REFUSED.....-8

21. On what days of the week is the bar open and what are the business hours on those days?

MON _____ TUES _____ WED _____ THURS _____
 FRI _____ SAT _____ SUN _____
 DON'T KNOW.....-9
 REFUSED.....-8

22. How old do you have to be to enter [*bar name*]?

21 YRS.....(GO TO Q24).....0
 18 YRS.....1
 VARIES BY TIME _____.....2
 NO AGE LIMIT.....3
 DON'T KNOW.....-9
 REFUSED.....-8

23. Are wristbands or stamps used to identify underage customers?

YES.....1
 NO.....0
 DON'T KNOW.....-9
 REFUSED.....-8

24. On a typical Friday night, is ID usually checked at the door, when ordering drinks, or both?

AT DOOR.....0
 WHEN ORDERING.....1
 BOTH.....2
 DON'T KNOW.....-9
 REFUSED.....-8

25. About how long before closing is the last call for drinks issued?

TIME BEFORE CLOSING.....|____|____| MINS
 DON'T KNOW.....-9
 REFUSED.....-8

26. Do customers generally have to pay when they order or can they start a tab?

PAY WITH ORDER ONLY0

TABS ALLOWED1

DON'T KNOW-9

REFUSED-8

27. Which of the following forms of payment are accepted...

	YES	NO	DON'T KNOW	REFUSED
A. Cash?	1	0	-9	-8
B. Credit card?	1	0	-9	-8
C. Travelers check?	1	0	-9	-8
D. Personal check?	1	0	-9	-8
E. Drink coupons?	1	0	-9	-8
F. Any others? _____	1	0	-9	-8

28. When multiple bartenders are on duty, are they assigned separate cash registers or use individual access codes or cards?

YES1

NO0

ONLY ONE ON DUTY AT A TIME2

DON'T KNOW-9

REFUSED-8

29. Does the bar use time-delayed safes?

YES1

NO0

DON'T KNOW-9

REFUSED-8

30. Are multiple bank deposits made on high volume days?

- YES.....1
- NO.....0
- DON'T KNOW.....-9
- REFUSED.....-8

31. Is there an official or formally stated limit on the amount of money that employees can keep in a single register at once?

- YES.....1
- NO.....0
- DON'T KNOW.....-9
- REFUSED.....-8

32. What other types of cash control devices or procedures does the bar use, if any, that would limit the amount of money lost in the event of a robbery?

33. On a typical Friday night at 10pm, is the lighting inside the bar...

- Bright,.....0
- Dim, or.....1
- Dark?.....2
- DON'T KNOW.....-9
- REFUSED.....-8

34. On a typical Friday night, about how many times are the restrooms cleaned between opening and closing?

- NUMBER OF TIMES RESTROOMS CLEANED.....|_|_|
- DON'T KNOW.....-9
- REFUSED.....-8

35. On a typical Friday night after 10:00pm, are taxis readily available outside the bar or do you have to call?

- AVAILABLE.....(GO TO SECTION 4).....0
- CALL.....1
- DON'T KNOW.....-9
- REFUSED.....-8

36. About how long does it take for a taxi to show up?

- TIME TO SHOW.....|_|_| HRS |_|_| MINS
- DON'T KNOW.....-9
- REFUSED.....-8

SECTION 4: Let me ask you a few questions about the types of activities and entertainment the bar provides.

37. Does the bar provide a place for dancing?

- YES.....1
- NO.....0
- DON'T KNOW.....-9
- REFUSED.....-8

38. Does the bar provide live entertainment on a regular basis, meaning at least once a week?

- YES.....1
- NO.....0
- DON'T KNOW.....-9
- REFUSED.....-8

39. Does the bar charge a cover to get in the door at any time or on any day?

- YES.....1
- NO.....0
- DON'T KNOW.....-9
- REFUSED.....-8

40. Which of the following types of music is *most* popular or *most* played at [*bar name*]... INTERVIEWER: IF THE RESPONDENT INSISTS THAT THERE IS A MIX OF MUSIC, PLEASE CIRCLE ALL THAT APPLY.

Top 40 or Pop,.....	0
Rock,.....	1
Rap/Hip-Hop.....	2
Country western.....	3
Jazz,.....	4
Blues,.....	5
Classical, or.....	6
Something else? _____.....	7
DON'T KNOW.....	-9
REFUSED.....	-8

41. Does [*bar name*] have weekly events, like ladies night or karaoke night?

YES.....	1
NO.....(GO TO Q43).....	0
DON'T KNOW.....(GO TO Q43).....	-9
REFUSED.....(GO TO Q43).....	-8

42. What are these weekly events and on what nights do they occur?

43. Does [*bar name*] have yearly or monthly events, such as New Years or St. Patrick's Day celebrations?

YES.....	1
NO.....(GO TO Q45).....	0
DON'T KNOW.....(GO TO Q54).....	-9
REFUSED.....(GO TO Q45).....	-8

44. What are these yearly or monthly events?

45. Does the bar ever sponsor, or do alcohol distributors come to the bar to sponsor, drinking games like “beer pong” or “quarters”?

YES.....	1
NO.....	0
DON'T KNOW.....	-9
REFUSED.....	-8

SECTION 5: The following questions are about the type of food and drink served at the bar.

46. Is food available for purchase?

YES.....	1
NO.....(GO TO Q49).....	0
DON'T KNOW.....(GO TO Q49).....	-9
REFUSED.....(GO TO Q49).....	-8

47. Are appetizers, full meals or both available for purchase?

APPETIZERS.....	0
FULL MEALS.....	1
BOTH.....	2
DON'T KNOW.....	-9
REFUSED.....	-8

48. About how long before closing does the kitchen generally close or is food no longer served?

TIME BEFORE CLOSING..... ____ ____ HRS ____ ____ MINS	
DON'T KNOW.....	-9
REFUSED.....	-8

49. Are free munchies, such as pretzels or popcorn, offered to customers?

YES.....	1
NO.....	0
DON'T KNOW.....	-9
REFUSED.....	-8

50. Are "Happy Hour" food or drink specials offered?

- YES.....1
- NO.....(GO TO Q52).....0
- DON'T KNOW.....(GO TO Q52).....-9
- REFUSED.....(GO TO Q52).....-8

51. What are these specials and when are they offered?

52. Not counting discounted times like "Happy Hour," how much is the cheapest alcoholic drink on the menu?

- COST.....\$|_|_| . |_|_|
- DON'T KNOW.....-9
- REFUSED.....-8

53. How much is the most expensive alcoholic drink?

- COST.....\$|_|_| . |_|_|
- DON'T KNOW.....-9
- REFUSED.....-8

54. What would you say are the three most popular drinks at this bar and how much do they cost?

55. Does the bar feature, advertise, or promote certain types of drinks without necessarily offering a discount?

- YES.....1
- NO.....(GO TO Q57).....0
- DON'T KNOW.....(GO TO Q57).....-9
- REFUSED.....(GO TO Q57).....-8

56. What types of drinks are these?

57. Can customers order drinks from tables, from the bar, or both?

ONLY FROM TABLES.....	0
ONLY FROM BAR.....	1
BOTH.....	2
DON'T KNOW.....	-9
REFUSED.....	-8

58. Are pour control devices used on alcohol bottles or are servings based on the bartenders' discretion?

POUR DEVICES.....	0
BARTENDER DISCRETION.....	1
DON'T KNOW.....	-9
REFUSED.....	-8

59. Are drinks served in glass containers, like bottles or cocktail and wine glasses?

YES.....	1
NO.....	0
DON'T KNOW.....	-9
REFUSED.....	-8

60. What type of drink policies does the bar have? For example, does the bar have a per patron drink limit or formal policies regarding when to stop serving overly-intoxicated individuals?

61. Can patrons buy cigarettes at the bar?

YES.....	1
NO.....(GO TO SECTION 6).....	0
DON'T KNOW.....(GO TO SECTION 6).....	-9
REFUSED.....(GO TO SECTION 6).....	-8

62. Are the cigarettes sold...

From behind the bar,.....	0
From a cigarette machine with dispensing controlled by staff, or.....	1
From a cigarette machine with automatic dispensing?.....	2
DON'T KNOW.....	-9
REFUSED.....	-8

SECTION 6: The next questions are about the people who work at the bar.

63. How many people are employed here?

NUMBER OF EMPLOYEES..... __ __	
DON'T KNOW.....	-9
REFUSED.....	-8

64. How many of the bar's current employees worked here six months ago?

NUMBER OF EMPLOYEES..... __ __	
DON'T KNOW.....	-9
REFUSED.....	-8

65. About how many bartenders work on a typical Friday night?

NUMBER OF BARTENDERS..... __ __	
DON'T KNOW.....	-9
REFUSED.....	-8

66. About how many wait staff other than bartenders work on a typical Friday night?

NUMBER OF WAIT STAFF..... __ __	
DON'T KNOW.....	-9
REFUSED.....	-8

67. About how many *female* bartenders and wait staff work on Friday nights?

NUMBER OF EMPLOYEES..... __ __	
DON'T KNOW.....	-9
REFUSED.....	-8

68. Are bartenders or wait staff allowed to drink alcohol while working?

YES.....	1
NO.....(GO TO Q70).....	0
DON'T KNOW.....(GO TO Q70).....	-9
REFUSED.....(GO TO Q70).....	-8

69. Are bartenders or wait staff allowed to accept alcoholic drinks purchased for them by customers?

YES.....	1
NO.....	0
DON'T KNOW.....	-9
REFUSED.....	-8

70. Are bartenders or wait staff required to wear a specific uniform or badge that would identify them as employees of the bar?

YES.....	1
NO.....	0
DON'T KNOW.....	-9
REFUSED.....	-8

71. Is the bar owner or main manager usually at the bar on a typical Friday night?

YES.....	1
NO.....	0
DON'T KNOW.....	-9
REFUSED.....	-8

72. Has the bar ever hired off-duty police officers to work as security?

YES.....	1
NO.....(GO TO Q74).....	0
DON'T KNOW.....(GO TO Q74).....	-9
REFUSED.....(GO TO Q74).....	-8

73. Does the bar currently hire police officers?

YES.....1
NO.....0
DON'T KNOW.....-9
REFUSED.....-8

74. Does the bar employ bouncers or security personnel other than police officers?

YES.....1
NO.....(GO TO Q81).....0
DON'T KNOW.....(GO TO Q81).....-9
REFUSED.....(GO TO Q81).....-8

75. About how many bouncers or security personnel work on a typical Friday night?

NUMBER OF BOUNCERS/SECURITY.....|__|__|
DON'T KNOW.....-9
REFUSED.....-8

76. Are security employees required to wear a specific uniform or badge that would identify them as security?

YES.....1
NO.....0
DON'T KNOW.....-9
REFUSED.....-8

77. Are security employees allowed to drink alcohol while working?

YES.....1
NO.....0
DON'T KNOW.....-9
REFUSED.....-8

78. Where do security employees receive *most* of their training to handle problem patrons? Are they...

- Not required to have training,.....0
- Not hired unless they have received prior training elsewhere,.....1
- Trained by the owner or other management staff,.....2
- Trained by other employees,.....3
- Trained by an outside organization that the bar paid for, or.....4
- Trained in some other way? _____.....5
- DON'T KNOW.....-9
- REFUSED.....-8

79. Do security personnel carry any of the following to protect themselves while working...

	YES	NO	DON'T KNOW	REFUSED
A. Billy club, night stick, or some other type of baton?	1	0	-9	-8
B. Mace or pepper spray?	1	0	-9	-8
C. Tazers?	1	0	-9	-8
D. Any other type of weapon or protective gear? _____	1	0	-9	-8

80. Is there anything that bouncers are *not* allowed to do to control problem patrons?

81. Where do employees, other than security personnel, receive *most* of their training to deal with disruptive or overly-intoxicated customers? Are they...

- Not required to have training,.....0
- Not hired unless they have received prior training elsewhere,.....1
- Trained by the owner or other management staff,.....2
- Trained by other employees,.....3
- Trained by an outside organization that the bar paid for, or.....4
- Trained in some other way?.....5
- DON'T KNOW.....-9
- REFUSED.....-8

82. In general, how do employees handle disruptive or overly-intoxicated customers?

83. In general, what do employees do when two or more customers begin fighting verbally or physically?

84. Do employees other than security personnel carry any of the following to protect themselves while working...

	YES	NO	DON'T KNOW	REFUSED
A. Billy club, night stick, or some other type of baton?	1	0	-9	-8
B. Mace or pepper spray?	1	0	-9	-8
C. Tazers?	1	0	-9	-8
D. Any other type of weapon or protective gear? _____	1	0	-9	-8

SECTION 7: Next, I'd like to ask you about the bar's patrons and problems that many bar owners and employees frequently face.

85. About how many customers do you serve on a typical Friday night?

- NUMBER OF PATRONS.....|_|_|_|_|
- DON'T KNOW.....-9
- REFUSED.....-8

86. On a typical Friday night, what percentage of the bar's customers would you consider regulars?

- PERCENTAGE OF REGULARS.....|_|_|_|%
- DON'T KNOW.....-9
- REFUSED.....-8

87. On a typical Friday night, about what percentage of the bar's customers is male?

- PERCENTAGE OF MALES.....|_|_|_|%
- DON'T KNOW.....-9
- REFUSED.....-8

88. On a typical Friday night, about what percentage of the bar's customers is white or Caucasian?

- PERCENTAGE OF CAUCASIAN.....|_|_|_|%
- DON'T KNOW.....-9
- REFUSED.....-8

89. Would you say that most customers are in their...

- 20s,.....0
- 30s,.....1
- 40 or older, or.....2
- a mixed-age crowd?.....3
- DON'T KNOW.....-9
- REFUSED.....-8

90. Briefly describe the type of customer the bar tries, or would like, to attract. For example, would the bar's ideal patron be college students, young professionals, working class, singles, married couples, or fit some other type of demographic?

91. Does the bar generally succeed in attracting these types of individuals?

- YES.....(GO TO Q93).....1
- NO.....0
- DON'T KNOW.....-9
- REFUSED.....-8

92. Briefly describe the type of customers that frequent [*bar name*].

93. On a typical Friday night, how many people do you stop serving alcohol to due to disruptive behavior or over-intoxication?

- NUMBER REFUSED SERVICE.....|_|_|
- DON'T KNOW.....-9
- REFUSED.....-8

94. On a typical Friday night, about how many people are asked to leave the bar?

- NUMBER ASKED TO LEAVE.....|_|_|
- DON'T KNOW.....-9
- REFUSED.....-8

95. On a typical Friday night, about how many people must be physically removed from the bar?

- NUMBER EJECTED.....|_|_|
- DON'T KNOW.....-9
- REFUSED.....-8

96. What are the three most common reasons people are removed or asked to leave the bar?

97. In the past year, about how many times per week have the police been called to the bar?

- NUMBER OF CALLS.....|__|__|
- DON'T KNOW.....-9
- REFUSED.....-8

98. What are the three most common reasons the police are called?

99. In the past year, about how many times per month have paramedics been called to the bar?

- NUMBER OF CALLS.....|__|__|
- DON'T KNOW.....-9
- REFUSED.....-8

100. What are the three most common reasons the paramedics are called?

101. With regard to crime, is the neighborhood surrounding the bar generally...

- Very safe,.....0
- Somewhat safe,.....1
- Somewhat unsafe, or.....2
- Very unsafe?.....3
- DON'T KNOW.....-9
- REFUSED.....-8

102. Within the last six months, has the bar experienced problems with people engaging in any of the following behaviors in or directly outside the bar...

	YES	NO	DON'T KNOW	REFUSED
A. Loitering?	1	0	-9	-8
B. Selling sex for drugs or money?	1	0	-9	-8
C. Gambling?	1	0	-9	-8
D. Dealing drugs?	1	0	-9	-8
E. Using drugs?	1	0	-9	-8
F. Vandalism?	1	0	-9	-8
G. Theft of valuables from patrons without force used?	1	0	-9	-8
H. Theft or break-ins of patrons' cars?	1	0	-9	-8
I. Fights between strangers?	1	0	-9	-8
J. Domestic violence, or fights between couples or family members?	1	0	-9	-8
K. Shootings?	1	0	-9	-8
L. Robberies of the bar by force or threat of force?	1	0	-9	-8
M. Robberies of patrons by force or threat of force?	1	0	-9	-8

103. Has the bar done anything in particular to prevent any of these incidents from occurring in the future?

YES.....1
 NO.....(GO TO Q105).....0
 DON'T KNOW.....(GO TO Q105).....-9
 REFUSED.....(GO TO Q105).....-8

104. What has the bar done and did these things seem to work?

105. Is there a particular type of *violent* incident that occurs most often at [*bar name*]?

- YES.....1
- NO.....(GO TO Q107).....0
- DON'T KNOW.....(GO TO Q107).....-9
- REFUSED.....(GO TO Q107).....-8

106. Please think generally about these types of incidents while answering the following questions.

QUESTION	RESPONSE
A. What kind of incident is it? For example, is it an assault or a robbery?	
B. When do these incidents generally happen? For example, do they tend to happen after a certain time or when the bar is more or less crowded?	
C. Do these incidents generally occur inside or directly outside the bar or in the parking lot?	
D. Who is usually involved? For example, is it between patrons or between a patron and an employee?	
E. What is usually the gender of the people involved?	
F. Is there usually something in particular that instigates the event?	
G. Do employees not involved in the incident usually try to intervene; and if so, what do they do?	
H. Do patrons not involved in the incident usually try to intervene; and if so, what do they do?	
I. Does someone usually call the police; and if so, who?	
J. When the police <i>are</i> called, do they usually arrive in time to help handle the incident; and what do they do when they get there?	

107. Can you think of the last *violent* incident that occurred at the bar?

- YES.....1
- NO.....(GO TO SECTION 8).....0
- DON'T KNOW.....(GO TO SECTION 8).....-9
- REFUSED.....(GO TO SECTION 8).....-8

108. About how long ago did the incident take place...

- Within the last month,.....0
- Within the last 6 months,.....1
- Within the last 12 months, or.....2
- More than a year ago?.....3
- DON'T KNOW.....-9
- REFUSED.....-8

109. I am going to ask you a short series of questions about this particular incident.

QUESTION	RESPONSE
A. What kind of incident was it? For example, was it an assault or a robbery?	
B. When did this incident happen? For example, what time did it occur? Was the bar more or less crowded than usually?	
C. Did the incident occur inside the bar, outside the bar, or in a parking lot?	
D. Who was involved? For example, was it between patrons or between a patron and an employee?	
E. What was the gender of the people involved?	
F. Was there something in particular that instigated the event?	
G. Did employees not involved in the incident try to intervene; and if so, what did they do?	
H. Did patrons not involved in the incident try to intervene; and if so, what did they do?	
I. Did someone call the police; and if so, who?	
J. IF THE POLICE WERE CALLED: Did they arrive in time to help handle the incident; and what did they do when they got there?	

SECTION 8: We are also interested in the actions of various regulatory agencies.

110. Please tell me about how many times in the past 12 months the following types of officials have visited the bar...

	# VISITS	DON'T KNOW	REFUSED
A. Cincinnati fire department?	_____	-9	-8
B. Cincinnati health inspectors?	_____	-9	-8
C. Ohio liquor control board?	_____	-9	-8
D. Building code inspectors?	_____	-9	-8
E. Any other inspectors? _____	_____	-9	-8

111. What types of recommendations or requirements, if any, did the officials make after visiting the property?

SECTION 9: Finally, I would like to ask you a general financial question about the bar.

112. Which of the following best describes the current financial status of the bar?

- Making profit.....0
- Breaking even.....1
- Losing money, or.....2
- Default-bankruptcy?.....3
- DON'T KNOW.....9
- REFUSED.....8

END OF SURVEY: That concludes our survey. Thank you for your participation.

INTERVIEWER: IF THERE WERE SEVERAL QUESTIONS THAT THE RESPONDENT COULD NOT ANSWER, PLEASE ASK FOR A CONTACT NAME AND NUMBER OF SOMEONE WHO COULD ANSWER THOSE QUESTIONS.

WRITE CONTACT INFORMATION ON LAST PAGE OF SURVEY ONLY.

ADDITIONAL CONTACTS

DATE REFERRED: _____ **NAME:** _____ **NUMBER:** _____

DATE REFERRED: _____ **NAME:** _____ **NUMBER:** _____

DATE REFERRED: _____ **NAME:** _____ **NUMBER:** _____

DATE REFERRED: _____ **NAME:** _____ **NUMBER:** _____

DATE REFERRED: _____ **NAME:** _____ **NUMBER:** _____

INTERVIEWER:

REMOVE AND SHRED THIS SHEET ONCE SURVEY IS COMPLETE.

Appendix II: Bar Site Observation Survey

BAR SITE OBSERVATION SURVEY

SURVEY INSTRUMENT

DO NOT CIRCULATE

SURVEYOR(S) NAME(S): _____

SURVEY DATE: _____ TIME: _____

BAR NAME: _____

BAR ADDRESS: _____

WEATHER:

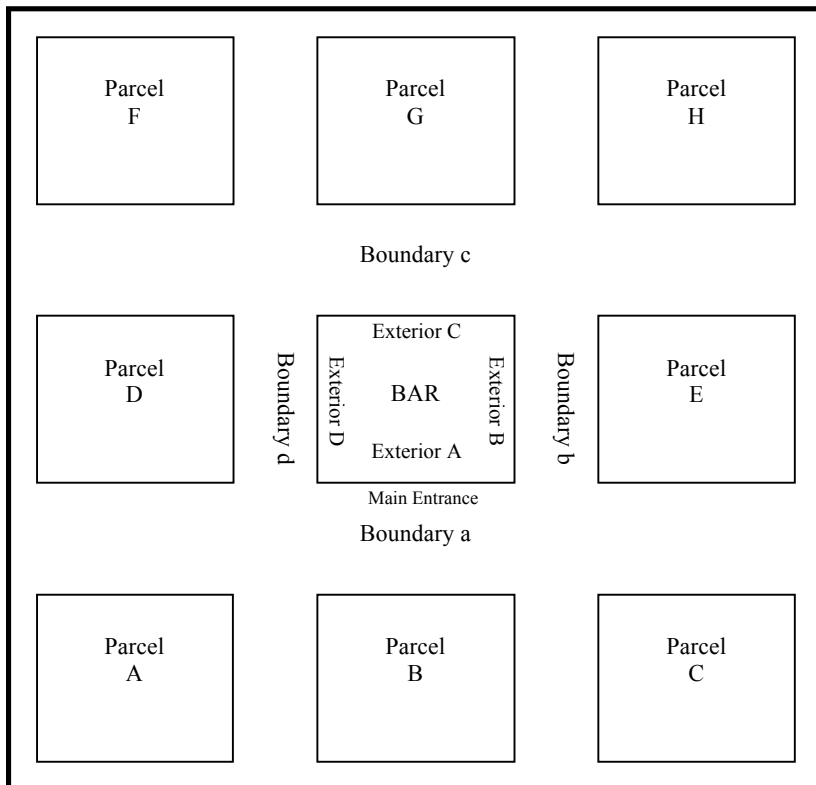
SUNNY/CLEAR

RAINING

OVERCAST/CLOUDY

OTHER _____

Diagram 1



- Parcel Attributes
- 1 Apartment
 - 2 Single family
 - 3 Duplex (two family)
 - 4 Retail
 - 5 Convenience store
 - 6 Bar
 - 7 Restaurant with alcohol
 - 8 Restaurant w/o alcohol
 - 9 Church
 - 10 Hospital
 - 11 Grade school
 - 12 High school
 - 13 Gas station
 - 14 Warehouse/Industrial
 - 15 Park/green space
 - 16 Parking lot
 - 17 Empty lot
 - 18 Vacant structure - secure
 - 19 Vacant structure - unsecure
 - 20 Other (describe)

- Boundary Attributes
- 1 Property boundary only
 - 2 Street
 - 3 Alley
 - 4 Other (describe)

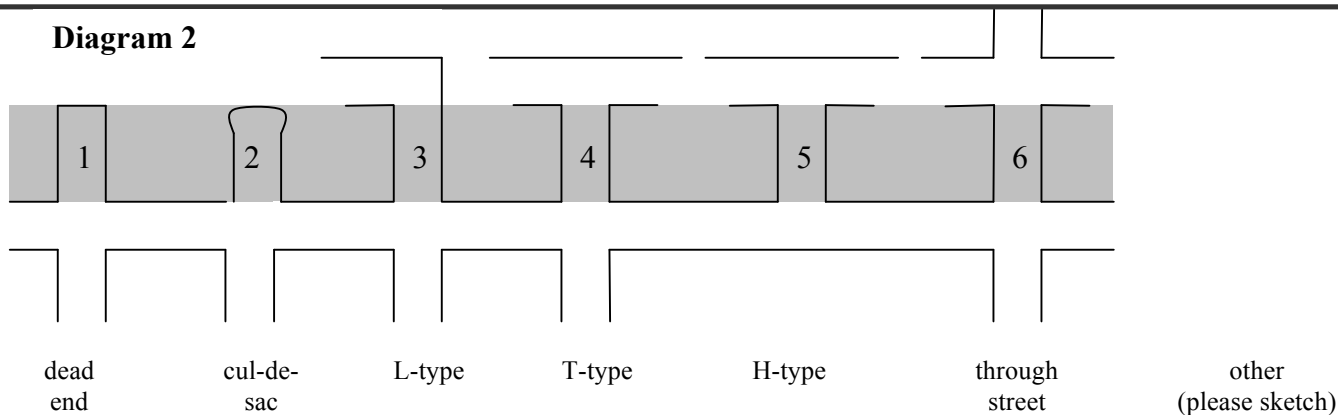
- Boundary Accessibility
- 1 Inaccessible
 - 2 Secure (no patron access)
 - 3 Patrons only
 - 4 Completely accessible

Visibility (1)
Percent of glass *currently* unobstructed on the exterior wall (3' from floor to ceiling of ground floor)

Visibility (2)
Percent of glass on the exterior wall, minus permanent obstructions only (e.g., excluding temporary fliers)

0	No glass	4	51-75%
1	1-10%	5	76-90%
2	11-25%	6	91-100%
3	26-50%		

Diagram 2



*Bar can fall anywhere within the shaded location

EXTERIOR

Describe the structures surrounding the bar using diagram 1 and the corresponding list of attributes.

	Parcel Attributes	Number of stories		Boundary Attributes	Boundary Accessibility
Parcel A	_____	_____	Boundary a	_____	_____
Parcel B	_____	_____	Boundary b	_____	_____
Parcel C	_____	_____	Boundary c	_____	_____
Parcel D	_____	_____	Boundary d	_____	_____
Parcel E	_____	_____	Complete the following <i>only</i> for each boundary coded as a <i>street</i> . Boundary a Number of lanes _____ Street type (refer to diagram 2) _____ Direction <input type="checkbox"/> One-way <input type="checkbox"/> Two-way <input type="checkbox"/> Median <input type="checkbox"/> Traffic light <input type="checkbox"/> Stop sign Boundary b Number of lanes _____ Street type (refer to diagram 2) _____ Direction <input type="checkbox"/> One-way <input type="checkbox"/> Two-way <input type="checkbox"/> Median <input type="checkbox"/> Traffic light <input type="checkbox"/> Stop sign Boundary c Number of lanes _____ Street type (refer to diagram 2) _____ Direction <input type="checkbox"/> One-way <input type="checkbox"/> Two-way <input type="checkbox"/> Median <input type="checkbox"/> Traffic light <input type="checkbox"/> Stop sign Boundary d Number of lanes _____ Street type (refer to diagram 2) _____ Direction <input type="checkbox"/> One-way <input type="checkbox"/> Two-way <input type="checkbox"/> Median <input type="checkbox"/> Traffic light <input type="checkbox"/> Stop sign		
Parcel F	_____	_____			
Parcel G	_____	_____			
Parcel H	_____	_____			
	Visibility (1)	Visibility (2)			
Exterior A	_____	_____			
Exterior B	_____	_____			
Exterior C	_____	_____			
Exterior D	_____	_____			
People loitering outside the property <input type="checkbox"/> Yes <input type="checkbox"/> No Describe _____					
Bar's trash receptacles overflowing <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Cans not visible					

#

- _____ Pay phones directly outside bar property
- _____ ATMs directly outside bar property
- _____ Pieces of litter larger than 2" by 2" directly around bar property
- _____ Pieces of large junk (e.g., old tires, appliances) directly around bar property
- _____ Overhead street lights on blocks represented by boundaries coded as streets
- _____ Abandoned (non drivable) automobiles on blocks represented by boundaries coded as streets
- _____ Bus stops within one block of the bar

Signage posted by bar on and around property (check all that apply)

- Bar name
- No trespassing
- Behavioral restrictions (no soliciting, loitering)
- Other _____
- Surveillance warning
- Parking rules
- Discounts or drink specials

INTERIOR

- _____ Number of patron entrances/exits (not emergency)
- _____ Number of emergency exits
- _____ Number of separate rooms
- _____ Posted minimum age requirement
- _____ Posted maximum occupancy
- _____ Number of separate bars

Number of seats

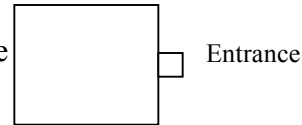
- _____ at the bar
- _____ on the floor
- _____ # broken or torn

_____ Number of tables _____ # broken

Percentage of main serving bar visible from the front door

- Not visible 1-10% 11-25% 26-50% 51-75% 76-90% 91-100%

Draw the location of the main or front serving bar in the square



Check all that is visible in the bar

- Graffiti on tables Graffiti on walls Broken light fixtures Pay phone
- Designated non-smoking section(s) Drink special advertisements ATM
- Surveillance camera(s) Broken lights Cigarette machines Vending machines

Available activities (check all that apply)

- Pool Darts Dancing Video games/poker Jukebox TV monitors
- Corn hole/bocce ball Other _____

Bar theme or specialty (check all that apply)

- Biker bar Dancing club Gay/Lesbian Irish pub Sports
- Western Other _____

Which best describes overall business

- Drinking establishment Drinking and some food Roughly even mix
- Mainly restaurant with supplemental bar Other _____

Describe any warnings or instructions posted within the bar:

RESTROOMS

	Men's	Women's
Total number of restrooms	_____	_____
Number of toilets/urinals	_____	_____
Patron graffiti	<input type="checkbox"/>	<input type="checkbox"/>
Bad odor	<input type="checkbox"/>	<input type="checkbox"/>
Dirty floors/toilets or sinks	<input type="checkbox"/>	<input type="checkbox"/>
Leaking pipes	<input type="checkbox"/>	<input type="checkbox"/>
Holes in stall walls	<input type="checkbox"/>	<input type="checkbox"/>
Broken/missing stall doors	<input type="checkbox"/>	<input type="checkbox"/>
Toilet paper in each stall	<input type="checkbox"/>	<input type="checkbox"/>
Inoperable toilets	<input type="checkbox"/>	<input type="checkbox"/>
Broken mirrors	<input type="checkbox"/>	<input type="checkbox"/>
Broken lights	<input type="checkbox"/>	<input type="checkbox"/>
Litter/paper on floor	<input type="checkbox"/>	<input type="checkbox"/>
Significant damage to walls	<input type="checkbox"/>	<input type="checkbox"/>
Hand soap available	<input type="checkbox"/>	<input type="checkbox"/>
Air-dryer/paper towels available	<input type="checkbox"/>	<input type="checkbox"/>

Appendix III: CAD Codes Included in Violent Calls for Police Service

<i>ID</i>	<i>SIGNAL</i>	<i>CODE</i>	<i>CAD</i>	<i>DESCRIPTION</i>
1	43	CHILD	ABDUCT	ABDUCTION
8	78	RPT/VIOL	ASSLT	ASSAULT JUST OCCURRED
9	78	RPT/VIOL	ASSLTP	ASSAULT PERSON INJURED
10	78	RPT/VIOL	ASSLTR	ASSAULT REPORT
16	49	RPT/VIOL	BARRIC	BARRICADED PERSON
28	9	RPT/VIOL	CUTP	PERSON CUT
29	50	RPT/VIOL	DEVICE	BOMB THREAT, EXPLOSIVE DEVICE
34	96	NT/FT/DV	DOMVIO	DOMESTIC VIOLENCE IN PROGRESS
35	96	NT/FT/DV	DOMVIR	DOMESTIC VIOLENCE REPORT
43	16	RPT/VIOL	GUN	PERSON W/GUN
45	6	ALARM	HOLDUP	HOLDUP ALARM (ALL EXCEPT SIG66)
46	48	RPT/VIOL	HOSTAG	HOSTAGE SITUATION
56	78	RPT/VIOL	MENACE	MENACING JUST OCCURRED
57	78	RPT/VIOL	MENACR	MENACING REPORT
60	32	MENTAL	CODE9V	MENTAL VIOLENT
71	99	RPT/VIOL	POHELP	POLICE OFFICER NEEDS ASSISTANCE
76	56	SEX/OFF	RAPE	RAPE JUST OCCURRED
77	56	SEX/OFF	RAPEP	RAPE PERSON INJURED
78	56	SEX/OFF	RAPER	RAPE REPORT
80	86	REPORTS	ROBB	ROBBERY JUST OCCURRED
81	86	REPORTS	ROBBIP	ROBBERY PERSON INJURED
82	86	REPORTS	ROBBR	ROBBERY REPORT
85	70	SEX/OFF	SEX	SEX OFFENSE JUST OCCURRED (NOT RAPE)
86	70	SEX/OFF	SEXR	SEX OFFENSE REPORT (NOT RAPE)
87	9	RPT/VIOL	SHOOTP	PERSON SHOT
88	10	RPT/VIOL	SHOTS	POSSIBLE SHOTS FIRED
92	66	ALARM	SIG66	AUTOMATED HOLDUP ALARM
93	54	ADMIN	SPURS	SUSPECT PURSUIT
94	57	ADMIN	SS	SUSPECT STOP
96	77	RPT/VIOL	STALK	STALKING IN PROGRESS

<i>ID</i>	<i>SIGNAL</i>	<i>CODE</i>	<i>CAD</i>	<i>DESCRIPTION</i>
97	77	RPT/VIO	STALKR	STALKING REPORT
100	14	SUSP/AUTO	SUSP	SUSPICIOUS PERSON OR AUTO
113	16	RPT/VIO	WEAPON	PERSON W/WEAPON (INCLUDES KNIFE)
126	78		ASSLTI	ASSAULT WITH INJURIES
134	78		ASSLTI	ASSAULT WITH INJURIES
140	56		RAPEI	RAPE WITH INJURIES
150	9		CUT	CUTTING HAS OCCURRED
155	86		ROBBI	ROBBERY WITH INJURIES
156	9		SHOOT	SHOOTING HAS OCCURRED
162	32		MHRTV	MENTALLH IMPAIRED - VIOLENT

Appendix IV: Apartment Manager Survey

APARTMENT PLACE MANAGEMENT SURVEY

SURVEY INSTRUMENT
CONFIDENTIAL INFORMATION
DO NOT CIRCULATE

APARTMENT NAME: _____

APARTMENT ADDRESS: _____

INTERVIEWER NAME: _____

INTERVIEW DATE: _____ TIME: _____

ANY PERSONAL IDENTIFIERS OF THE RESPONDENTS,
INCLUDING NAMES AND TELEPHONE NUMBERS,
SHOULD ONLY BE WRITTEN ON THE LAST PAGE OF THIS SURVEY

PERSONAL INFORMATION MUST BE REMOVED AND SHREDDED
ONCE SURVEY IS COMPLETE

INTRODUCTION AND INFORMED CONSENT - APARTMENTS

Hi, my name is [*interviewer name*]. I'm a researcher from the University of Cincinnati. We're interviewing Cincinnati apartment owners, managers, and staff about their experience with managing rental housing. This survey is funded by the National Institute of Justice.

Our records indicate that you own or manage [*apartment name (or if name of the business is unknown)*] apartments at [*address*]. Is this correct?

YES, CONTINUE NO: Could you please refer me to the current owner or manager?
[WRITE NAME & NUMBER ON LAST PAGE] Thank you for your time.

Can you answer questions about the day-to-day operations of the apartments, or is there someone else we can contact?

REFUSED PARTICIPATION: Thank you for your time. CAN ANSWER, CONTINUE
 SOMEONE ELSE: [WRITE NAME & NUMBER ON LAST PAGE] Thank you for your time.

The survey should only take about 20 minutes to complete. Would you be willing to participate in our study now or can we schedule an interview during a more convenient time?

REFUSED PARTICIPATION: Thank you for your time. NOW, CONTINUE
 ANOTHER TIME: [WRITE NAME/DATE/TIME & NUMBER ON LAST PAGE - CONFIRM DATE & TIME] - Thank you for your time.

The purpose of this study is to understand how owners and managers of rental housing and businesses that serve alcohol address crime and disorder problems. You will be one of approximately 1500 participants taking part in this study. You will be asked a series of questions related to your business. You will receive no direct benefit from your participation in this study, but your participation may help other business owners improve safety at their properties and assist government agencies to formulate reasonable and effective policies.

There are no foreseeable risks associated with this survey. However, you have the right to refuse to answer any question or to stop the interview at any time without penalty. Your participation is voluntary and any answers you give will be kept strictly confidential and used only for research purposes. We will remove your name and any other personal identifying information from your answers and shred this information after you have completed the survey. All completed surveys will be stored in a locked filing cabinet and shredded three years after the end of this study. The data from the study may be published; however, neither you nor your business will be identified by name. To help protect the privacy of others, we ask that you do not use the names of other employees or patrons when answering questions. By answering the following survey questions, you are giving your consent to participate in this study. May we continue?

RESPONDENT CONSENT: YES, CONTINUE NO: Thank you for your time.

If you have any other questions about this study or would like a copy of the study's findings, you may call Dr. Pamela Wilcox at the University of Cincinnati. You can also contact the Chair of the Institutional Review Board. Would you like either of their contact numbers now?

IF YES: Dr. Wilcox - (513) 556-2957; Chair of IRB - (513) 558-5784

OWNERSHIP AND APARTMENT PROPERTY CHARACTERISTICS

1. In what year was the apartment complex built?

_____ Year

2. Which of the following best describes the ownership of these apartments?

- Sole ownership
- Partnership
- Corporation
- Some other business agreement (please describe) _____

3. How long have you owned these apartments?

_____ Time apartments owned

4. Do you or any other owners of these apartments belong to any apartment- or business-owner associations?

- No → SKIP to question 6
- Yes ↓

5. Which associations do you or the other owners belong to?

6. About how often do you or any other owners visit these apartments?

- Daily
- Weekly
- Monthly
- Quarterly
- Yearly
- Less than once a year

7. Are these apartments advertised?

- No → SKIP to question 10
- Yes ↓

8. Where are they advertised? (CHECK ALL THAT APPLY)

- In apartment or housing guides
- In City Beat or CinWeekly
- In the Cincinnati Enquirer or Post
- On the internet
- Someplace else (please describe) _____

9. Which of the following best describes the current financial status of these apartments?

- Making profit
- Breaking even
- Losing money

10. How many other apartment complexes do you own...

In Cincinnati?

- 0
- 1
- 2-3
- 4 or more

Outside of Cincinnati?

- 0
- 1
- 2-3
- 4 or more

PROPERTY MANAGEMENT

11. Is there a rental or management office currently at the apartment complex?

- Yes
- No

12. Are people hired to help manage these apartments?

- No → SKIP to question 17
- Yes ↓

13. Is a management company or independent individuals hired to manage the apartments?

- Management company
- Hire individuals

14. Are any of the managers compensated with rent?

- No
- Yes

15. Do any of the managers live in the apartments?

- No
- Yes

16. Where do managers receive *most* of their training? Are they...

- Not required to have training
- Not hired unless they have received prior training elsewhere
- Trained by the owner or other management staff
- Trained by an outside organization paid for by the owner
- Trained in some other way? (please describe)

17. Who conducts *most* of the maintenance and repairs on these apartments?

- Employees hired specifically to handle maintenance issues
- Owner, manager, or other staff
- Tenants
- Outside contractors
- Someone else (please describe) _____

18. Are security personnel, other than management or maintenance staff, hired to patrol these apartments?

- No → SKIP to question 21
- Yes ↓

19. Who provides security services? (CHECK ALL THAT APPLY)

- Security company
- Individuals hired as security officers
- Off-duty police officers
- Someone else (please describe) _____

20. Where do the security personnel receive *most* of their training? Are they...

- Not required to have training
- Not hired unless they have received prior training elsewhere
- Trained by the owner or other management staff
- Trained by an outside organization paid for by the owner
- Trained in some other way? (please describe)

RESIDENTS

21. Does the apartment complex generally succeed in attracting the type of residents the owner(s) would like to rent to?

- No
- Yes

22. Are these senior-only apartments?

- Yes → SKIP to question 24
- No ↓

23. About what percentage of households have children living in them?

- Under 10%
- 10% - 25%
- 26% - 50%
- 51% - 75%
- 76% - 90%
- 91% - 100%

24. About what percentage of tenants have lived at these apartments for two or more years?

- Under 10%
- 10% - 25%
- 26% - 50%
- 51% - 75%
- 76% - 90%
- 91% - 100%

25. Are prospective tenants required to undergo financial background checks?

- No
- Yes

26. Are criminal background checks conducted before potential tenants are allowed to move in?

- No → SKIP to question 28
- Yes ↓

27. For which of the following types of offenses would an applicant be rejected?

- Sex offense
- Drug offense
- Violent offense - for example, robbery or domestic violence
- Non-violent offense - for example, vandalism
- Other offense (please describe) _____

28. Are the tenants' previous landlords contacted during the application process?

- No
- Yes

Are tenants required to sign a lease?

- No → SKIP to question 31
- Yes ↓

29. Which of the following behavioral restrictions are *explicitly* included in the lease? (CHECK ALL THAT APPLY)

- Limitation on number of occupants
- Limitation on guest length of stay
- Prohibit disruptive behavior (e.g., loud stereos)
- Prohibit criminal activity
- Prohibit large parties
- Require cleanliness
- Other restrictions (please describe)

30. Are tenants allowed to have dogs?

- No
- Yes

31. What percentage of tenants is currently delinquent in rent payments?

- 0%
- 1 - 10%
- 11% - 25%
- 26% - 50%
- 51% or more

32. For which of the following would a tenant be evicted from these apartments? (CHECK ALL THAT APPLY)

- Non-payment of rent
- Drug arrest or conviction
- Violent crime arrest or conviction
- Property crime arrest or conviction
- Repeatedly causing a disturbance on the property
- Having guests who cause damage or other problems
- Any other reasons (please describe)

33. Were any eviction notices served at this property in the last year?

- No → SKIP to question 36
- Yes ↓

34. How many eviction notices were served?

_____ Number served

35. What percentage of these apartments is rented by Section 8 voucher holders?

- 0%
- 1 - 10%
- 11% - 25%
- 26% - 50%
- 51% or more

RESIDENTIAL UNITS

36. How many individual apartment units are there in the apartment complex?

_____ Number of units

37. During the past year, what percentage of these apartments was vacant each month?

- 0%
- 1 - 10%
- 11% - 25%
- 26% - 50%
- 51% or more

38. What is the average monthly rent for the *most* expensive unit?

\$_____ Cost of most expensive unit

39. What is the average monthly rent for the *least* expensive unit?

\$_____ Cost of least expensive unit

40. How many bedrooms are in the *largest* unit?

_____ Number of bedrooms in largest unit

41. How many bedrooms are in the *smallest* unit?

_____ Number of bedrooms in smallest unit

42. Which of the following security features come standard with the units? (CHECK ALL THAT APPLY)

- Standard door key locks
 - Door deadbolts
 - Door chains
 - Intruder alarms
 - Door peepholes
 - Other security features (please describe)
-

43. Are the locks changed or rekeyed before new tenants move in?

- No
- Yes

44. Are residents provided assigned parking spaces?

- No → SKIP to question 47
- Yes ↓

45. How is the assigned parking regulated? (CHECK ALL THAT APPLY)

- Specific spaces assigned
 - Require parking decals/stickers or permits
 - Restricted access to parking lot
 - Other forms of parking regulations (please describe)
-
-

46. Which of the following best describes the laundry facilities in these apartments? (CHECK ALL THAT APPLY)

- Washer/dryer provided in each apartment
- Washer/dryer hook-ups available in each apartment
- Communal laundry rooms
- Other (please describe) _____

47. Which of the following are offered to residents? (CHECK ALL THAT APPLY)

- Monthly or weekly resident newsletter
 - Group games, barbeques, or other tenant activities
 - Door attendant(s)
 - Mail services, such as signing for packages
 - Dry cleaning service
 - Parking attendant or guard at stationed at entrance
 - Gym or workout center
 - Access to clubhouse for private parties
 - Closed circuit TV visual of entrances
 - Free internet service
 - Any other services (please describe)
-

CRIME AND CURRENT LEGISLATION

48. Is crime at the apartment complex a serious concern for the owner(s) or tenants?

- No
- Yes

49. When crime does occur, who is usually responsible?

- Residents
- Guests of residents
- Outsiders
- Others (please describe) _____

50. Are you familiar with the ordinance proposed by City Council this year that would make landlords financially responsible for repeat police calls for service to their property?

- No → SKIP to END OF SURVEY
- Yes ↓

51. Do you or other people involved in managing these apartments think that this legislation will help make rental properties safer?

- No
- Yes

52. How would this ordinance affect the way these apartments are managed?

This concludes our survey. Thank you for participating in the Apartment Management Survey. We appreciate you taking time to complete our survey.

ADDITIONAL CONTACTS

DATE REFERRED: _____ **NAME:** _____ **NUMBER:** _____

DATE REFERRED: _____ **NAME:** _____ **NUMBER:** _____

DATE REFERRED: _____ **NAME:** _____ **NUMBER:** _____

DATE REFERRED: _____ **NAME:** _____ **NUMBER:** _____

DATE REFERRED: _____ **NAME:** _____ **NUMBER:** _____

INTERVIEWER:

REMOVE AND SHRED THIS SHEET ONCE SURVEY IS COMPLETE.

Appendix V: Apartment Site Observation Survey

APARTMENT SITE OBSERVATION SURVEY

SURVEY INSTRUMENT

DO NOT CIRCULATE

SURVEYORS(S) NAME(S): _____

SURVEY DATE: _____ TIME: _____

APARTMENT NAME: _____

APARTMENT ADDRESS: _____

WEATHER:

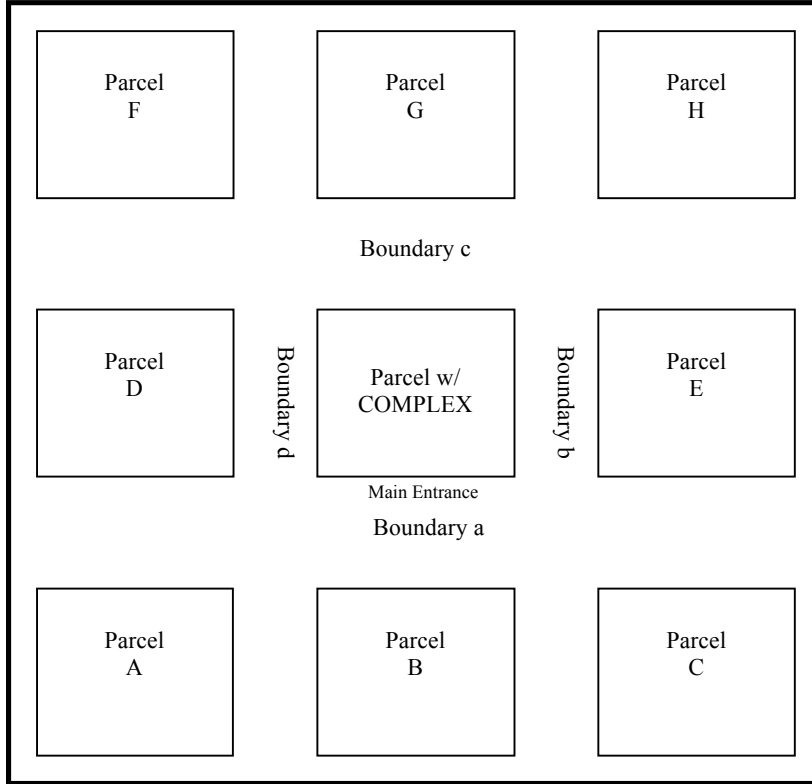
SUNNY/CLEAR

RAINING

OVERCAST/CLOUDY

OTHER _____

Diagram 1



Parcel Attributes

- 1 Apartment
- 2 Single family
- 3 Duplex (two family)
- 4 Retail
- 5 Convenience store
- 6 Bar
- 7 Restaurant with alcohol
- 8 Restaurant w/o alcohol
- 9 Church
- 10 Hospital
- 11 Grade school
- 12 High school
- 13 Gas station
- 14 Warehouse/Industrial
- 15 Park/green space
- 16 Parking lot
- 17 Empty lot
- 18 Vacant structure - secure
- 19 Vacant structure - unsecure
- 20 Other (describe)

Boundary Attributes

- 1 Property boundary only
- 2 Street
- 3 Alley
- 4 Other (describe)

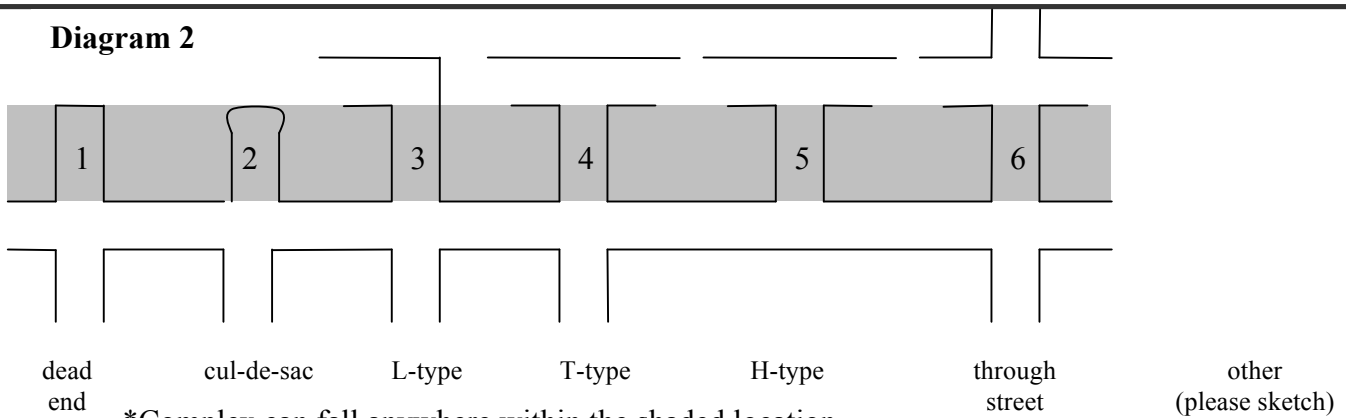
Complex Accessibility

- 1 Inaccessible (no openings)
- 2 Resident only
- 3 Partially enclosed
- 4 Completely accessible

Complex Enclosures

- Only for those with accessibility coded as 1 through 3
- 1 Wall
 - 2 Shrubbery
 - 3 Fence
 - 4 Gate
 - 5 Other (describe)

Diagram 2



EXTERIOR

Describe the structures surrounding the complex using diagram 1 and the corresponding list of attributes.

	Parcel Attributes	Number of stories	Boundary Attributes	Complex Accessibility	Complex Enclosures
Parcel A	_____	_____	Boundary a	_____	_____
Parcel B	_____	_____	Boundary b	_____	_____
Parcel C	_____	_____	Boundary c	_____	_____
Parcel D	_____	_____	Boundary d	_____	_____
Parcel E	_____	_____			
Parcel F	_____	_____			
Parcel G	_____	_____			
Parcel H	_____	_____			
<p>Complex on corner lot <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p># of entrances into complex _____</p> <p>Attendant or attendant station at entrance <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Entrances to complex secured using (check all that apply) <input type="checkbox"/> Not secured <input type="checkbox"/> Swipe card <input type="checkbox"/> Key <input type="checkbox"/> Call box <input type="checkbox"/> Attendant/attendant station Other _____</p>			<p>Complete the following <i>only</i> for each boundary coded as a <i>street</i>.</p> <p>Boundary a Number of lanes _____ Street type (refer to diagram 2) _____ Direction <input type="checkbox"/> One-way <input type="checkbox"/> Two-way <input type="checkbox"/> Median <input type="checkbox"/> Traffic light <input type="checkbox"/> Stop sign</p> <p>Boundary b Number of lanes _____ Street type (refer to diagram 2) _____ Direction <input type="checkbox"/> One-way <input type="checkbox"/> Two-way <input type="checkbox"/> Median <input type="checkbox"/> Traffic light <input type="checkbox"/> Stop sign</p> <p>Boundary c Number of lanes _____ Street type (refer to diagram 2) _____ Direction <input type="checkbox"/> One-way <input type="checkbox"/> Two-way <input type="checkbox"/> Median <input type="checkbox"/> Traffic light <input type="checkbox"/> Stop sign</p> <p>Boundary d Number of lanes _____ Street type (refer to diagram 2) _____ Direction <input type="checkbox"/> One-way <input type="checkbox"/> Two-way <input type="checkbox"/> Median <input type="checkbox"/> Traffic light <input type="checkbox"/> Stop sign</p>		
<p>People loitering outside the property <input type="checkbox"/> Yes <input type="checkbox"/> No Describe _____</p>					

- # _____ Pay phones directly surrounding complex
- _____ Pieces of litter larger than 2" by 2" directly around complex
- _____ Pieces of large junk (e.g., old tires, appliances) directly around complex
- _____ Overhead street lights on blocks represented by boundaries coded as streets
- _____ Abandoned (non drivable) automobiles on blocks represented by boundaries coded as streets
- _____ Bus stops within one block of the complex

- Signage *posted by complex* in and around property (check all that apply)
- | | |
|---|---|
| <input type="checkbox"/> Apartment name | <input type="checkbox"/> No trespassing |
| <input type="checkbox"/> Welcome | <input type="checkbox"/> Behavioral restrictions (no soliciting, loitering) |
| <input type="checkbox"/> Vacancy | <input type="checkbox"/> Surveillance warning |
| <input type="checkbox"/> Enticements (services/amenities) | <input type="checkbox"/> Parking rules |
| <input type="checkbox"/> Discounts | <input type="checkbox"/> Way finding (directions to office, laundry) |
| <input type="checkbox"/> Other _____ | |

COMPLEX

- Complex located on a corner lot Yes No
- Retail building below or above the complex No Below Above
- Overgrown grass or weeds around or in complex Yes No No green space
- Landscaping, including flowerbeds/neat hedges Yes No
- Personal belongings (e.g., bikes, grills) left outside Yes No # _____

Indicate how many of each of the following are in the complex:

- _____ Lighting fixtures around complex perimeter
 - _____ # broken
- _____ Lighting fixtures at complex entrances
 - _____ # broken
- _____ Pay phones within complex
- _____ Pieces of litter larger than 2" by 2" within complex
- _____ Pieces of large junk (e.g., old tires, appliances) within complex
- _____ Alcoholic drink containers
- _____ Streets/paved roads in complex
- _____ Potholes larger than 6" by 6" on complex streets
- _____ Clubhouse
- _____ Rental/management offices
- _____ Swimming pools
 - Swimming areas have secured entrances Yes No
- _____ Playgrounds
 - Equipment in need of repair None Minor Major
- _____ Picnic areas (including picnic tables and grills)
 - Equipment in need of repair None Minor Major
- _____ Benches/sitting areas, excluding picnic areas
 - _____ # seats broken
- _____ Communal trash areas
 - Neat Overflowing
- _____ Exterior laundry rooms
 - Laundry rooms have secured entrances Yes No
 - Percentage of the laundry rooms visible from outside
 - 0% 1-10% 11-25% 26-50% 51-75% 76-90% 91-100%

PARKING

Type of *off*-street parking provided (check all that apply)

- None Open spaces Assigned spaces Carport Individual garages
 Communal garage/structure Other _____
- Parking areas secure Yes No
Security cameras in parking areas Yes No
Total number of parking spaces _____
Number of lighting fixtures in parking areas _____ # broken _____
Number of abandoned (non drivable) automobiles in complex _____
Broken car window glass in parking areas Yes No

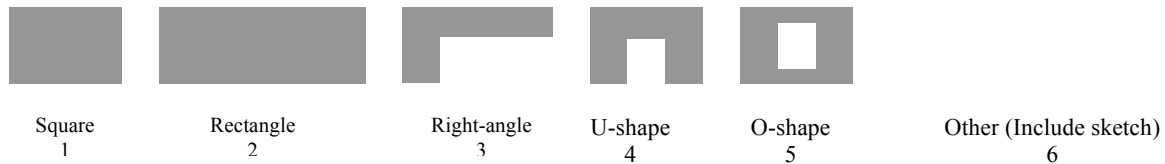
Type of *on*-street parking available directly surrounding the complex (check all that apply)

- No parking zones Loading/unloading only Metered Time restricted
 Unrestricted Resident only Other _____

BUILDINGS

Circle the figure in diagram 1 that most closely resembles the shape of the apartment buildings

Diagram 1



For interior apartments, doors to the buildings secured using (check all that apply)

- Not secured Swipe card Key Call box Attendant Other _____

Indicate how many of the following are present:

- _____ Apartment buildings in complex
_____ Floors in each apartment building (if multiple building types, report highest number of floors)
_____ Outer doors to each apartment building (if multiple building types, report those with most outer doors)
_____ Exterior fire escapes
_____ Light fixtures on building exterior
_____ # broken
_____ Lighting fixtures at building entrances
_____ # broken
_____ Buildings with graffiti
_____ Buildings with chipping paint
_____ Buildings with structural problems such as missing brick, stone, stucco, siding, etc.
(missing material must be greater than 1x1 foot)
_____ Exterior planters, awnings, railings, gates, signs or other structural decorations broken or in need of repair

UNITS

Access units in buildings from Interior of building(s) Exterior of building(s) Both

Indicate how many of the following are present:

_____ Total number of units in complex

_____ Outer doors to each unit (doors that can be accessed from outside/outdoors)

Type of doors (check all that apply)

Sliding/glass Wood Metal Screen Other _____

_____ Front door locks on each unit

Type of locks on front doors (check all that apply)

Knob/key Deadbolt Padlock Other _____

_____ Windows on each unit

_____ Broken windows

_____ Torn window screens

_____ Boarded windows

_____ Units with security bars, lattice, or other devices on windows

_____ Unsecured stairwells leading to units (not open or uncovered stairs)

Units have (check all that apply)

Peepholes Window screens Enclosed yards Individual patios/balconies

Type of air-conditioners visible (check all that apply)

None Window units Wall mounted Central air Other _____

Appendix VI: Changes in the Study Design

Many proposed studies require modification from the proposal to the implementation. This study was not an exception. Typically, few readers are interested in such changes, as the implemented study and its findings are of the greatest interest. Nevertheless, there are some lessons that can be drawn from documenting the internal history of research. So rather than complicate the report's narrative with an extended discussion of changes, we have elected to discuss them in an appendix.

The original proposal called for the use of a case-control design (see Schlesselman, 1982 and Loftin and McDowall, 1988). Such designs are useful when a particular value on the independent variable is rare. In such circumstances, some economies in data collection can be realized by selecting cases on the values of the dependent variable (in standard research designs we stratify on one or more independent variables). As can be seen from the distribution of violence across bars (see Figure 2, for example) and apartments (Table 22) shown in this report, this is the case in Cincinnati.

When we closely examined the number of bars in Cincinnati, we found that there were far fewer of these facilities than we had anticipated based on examining the official data. Consequently, we determined that it would far better to collect data on all bars rather than a sample. Because the level of violence was not critical to the selection of cases, this also reduced the need to check on the stability of violence. As noted in the main body of this report, we relied on a two year window of events reported to police. So we are reasonably confident that bars that have zero reports of violence over two years are very low violence places, and those that have three or more violence events in a two year period are predictably problematic.

We altered the apartment complex data collection process for the following reasons: 1) Apartment owners seldom live on their property, and many live out of the city (in contrast there was always a place manager at a bar when it was open for business), and 2) County Auditor data has the address of the apartment land parcels, but not phone numbers where owners can be reached. We determined that a mail survey would be the only feasible alternative available. Mail surveys are relatively inexpensive to administer, though they typically have low response rates. Complicating the matter, we needed a minimum of 10 complete responses from managers from a neighborhood to use multi-level modeling and we needed to assure that our responses were from as many neighborhoods as possible. Further, since apartment owners sometimes own several complexes, we needed to make sure the respondents were providing answers about a single specific apartment complex rather than their portfolio of properties. These considerations made a case-control design impractical. In the end, we choose an approach that took into account the emerging facts about apartment complexes in Cincinnati, and allowed us to use multi-level modeling to tease out the place and neighborhood influences on violence. As was the case with bars, the necessity to identify stable high and low violence apartment complexes prior to sampling was no longer necessary. The two year window for collecting data on violence allows us to be reasonably confident that the differences among complexes with regards to violence are meaningful.

For both apartment complexes and bars we had hoped to collect violence data prospectively, following survey data collection. This would have assured that the management practices we were documenting were in place prior to the crimes. However, because of delays in collecting survey data and observing sites, prospective data collection proved to be infeasible. Consequently, many of our results suffer from the normal ambiguous temporal order problem as

all cross-sectional research. Nevertheless, the use of two years of violence data suggests that the levels of violence, at least at either extreme, are stable.

In conclusion, while the original proposal called for the same methods for data collection and analysis to be used for both bars and apartments, the distribution of these very different facilities across Cincinnati neighborhoods, the differences in numbers of these sites, and the ability to access place managers required us to take different strategies. Bars are concentrated in a few neighborhoods so most neighborhoods had very few or no bars, while a few neighborhoods had many bars (often in very close proximity within that neighborhood). This precluded the use of multi-level modeling and forced us to rely on maps and standard statistical analysis. Apartment complexes were scattered throughout the city, in sufficient numbers in most neighborhoods that multilevel modeling was feasible. We could attempt to collect data from all bars, given their numbers, but this was not feasible with apartment complexes. Bars are open to the adult public and have a manager on site (typically the bar tender who often had time to talk), and they had phone numbers listed. This made interviews with managers much easier to arrange. Apartment owners were seldom at their properties and most did not employ resident managers. Finding phone numbers for owners proved to be difficult. These factors made on site data collection difficult. A major lesson we drew from this experience is that there is no single best strategy for examining how the management of places influences crime. Rather different types of facilities will require very different data collection and analysis methods.