University of Cincinnati

Date: 3/11/2019

I, Shannon J Linning, hereby submit this original work as part of the requirements for the degree of Doctor of Philosophy in Criminal Justice.

It is entitled:

The Neo-Jacobian Perspective of Place and Neighborhood Crime: A Case Study of Property Ownership, Redevelopment, and Crime in Walnut Hills, Cincinnati, Ohio

Student's name: **Shannon J Linning**

This work and its defense approved by:

Committee chair: John Eck, Ph.D.

Committee member: J.C. Barnes, Ph.D.

Committee member: Kate Bowers, Ph.D.

Committee member: Pamela Wilcox, Ph.D.

32951

The Neo-Jacobian Perspective of Place and Neighborhood Crime: A Case Study of Property Management, Redevelopment, and Crime in Walnut Hills, Cincinnati, Ohio

A dissertation submitted to the
Graduate School
of the University of Cincinnati
in partial fulfillment of the
requirements for the degree of

Doctor of Philosophy (Ph.D.)

in the School of Criminal Justice
of the College of Education, Criminal Justice, and Human Services

March 11, 2019

by

Shannon J. Linning

M.A. Simon Fraser University, 2015
B.A. (Hons.) Simon Fraser University, 2012

Committee: John E. Eck, Ph.D. (chair)
Pamela Wilcox, Ph.D.
J.C. Barnes, Ph.D.
Kate J. Bowers, Ph.D.

ABSTRACT

Architectural journalist Jane Jacobs is arguably one of the most influential figures in urban social sciences and city planning. Yet, she has received minimal attention in the criminological literature. I argue this stemmed from her ideas being linked to those of Oscar Newman. However, these initial interpretations of her ideas—namely that street safety is achieved through surveillance by *residents*—do not appear to take her contextual examples into account. This mistake is important because it obscures a vital source of social control in urban environments. In this dissertation I examine Jacobs' work and argue that she regarded *shopkeepers* (i.e., place managers) as the primary source of informal social control. While past interpretations assume Jacobs had a resident-focused explanation of crime, I propose that she had an owner/manager-focus in her writing. From this I unite her work with recent theories of place management into a Neo-Jacobian perspective of place and neighborhood crime. The theory highlights how deliberate decisions and actions taken by property owners and government agencies give rise to neighborhood crime.

I then test the theory with three studies using a mixed methods approach. The first study examines the mechanisms of property ownership and neighborhood crime through qualitative interviews in Walnut Hills, a neighborhood in Cincinnati, Ohio that is currently under redevelopment. Next, I conduct a time series analysis to examine how place-based redevelopment influences neighborhood crime in the same neighborhood. The last study tests the notion that there are at least two distinct crime generating processes operating within neighborhoods and that each possess different causal mechanisms.

The results suggest that people external to neighborhoods can wield immense control within neighborhoods through property ownership. Moreover, the political decisions that impact

the economic vitality of businesses can have a strong influence on crime. However, the collective efforts to change ownership—particularly of businesses—using a place-based strategy can abate some of these crime problems. Lastly, crime at hotspots do not appear to be caused by the same mechanisms proposed in the resident-focused literature. Instead, there are other crime generating process operating at these locations that contribute to neighborhood crime.

Although the results provide support for the Neo-Jacobian perspective and the existence of owner/manager effects, they do not refute the existence of resident-focused ones. This implies the need to unite these two perspectives in our study of neighborhood crime. Future research should also explore how governmental policies influence ownership and management practices within neighborhoods.

ACKNOWLEDGEMENTS

I wish to start by thanking the members of my dissertation committee. First, I give my greatest thanks to my chair Dr. John Eck. The ideas for this dissertation started the first day I set foot on campus. During that meeting you gave precedent-setting directions that changed my academic career. You told me that you wanted us to work as colleagues. That meant I had to think for myself, come up with my own ideas, and not be afraid to challenge your way of thinking. And you didn't just say this, you actually meant it! For this I am forever grateful. Thank you for teaching me how to think about problems. Thank you for pushing me to become a better writer and scholar. Thank you for always making our work fun. And most importantly, thank you for being a constant source of support.

I would like to thank Dr. Pamela Wilcox for her insightful comments throughout this dissertation process. You pushed me to think about concepts in new ways and made the final product much stronger. I owe many thanks to Dr. J.C. Barnes for his contributions, particularly in the methodological and statistical portions of my dissertation. You have always been so encouraging and such an excellent person to bounce ideas off of. I also wish to acknowledge my external examiner Dr. Kate Bowers. You raised so many thought-provoking questions and make me think carefully about the important details in my work. Thank you all so much for your kindness and feedback throughout this process.

I also wish to thank the wonderful faculty in UC's School of Criminal Justice for all the time, advice, lessons, and support they have given me. I would like to acknowledge Dr. Edward Latessa, Dr. Christopher Sullivan, Dr. John Wright, Dr. Michael Benson, Dr. Francis Cullen, Dr. Joseph Nedelec, and Dr. James Frank in particular for their guidance throughout my degree. I also owe much gratitude to the administrative staff in our department, namely Jean Gary, Erin Cochran, Janice Miller, Shelley Paden, Terri Bennett, and John Schwartz. Having you to turn to meant there was no problem that could not be solved. Thank you so much for your support.

I would like to thank Daniel Gerard for his help, insight, and access to resources. Our conversations always generated new ideas and helped me think about how to translate these ideas into practical strategies. I would also like to acknowledge Kevin Wright for giving me his time, insights, and access to information about Walnut Hills. And I would like to thank all my participants. Though I will always keep my promise and not name them, they know who they are. I hope you understand how valuable your contributions are to this dissertation. Thank you!

This experience would not have been half as rewarding if I did not have an incredible cohort of peers to experience it with. I give great thanks to Amanda Graham, Cheryl Johnson, James Kelsay, Heejin Lee, Joshua Long, Ryan Motz, Jordan Papp, Ian Silver, Shahin Tasharoffi, and Nicole Wilkes…and our cohort additions Christina Poole and Stephanie Duriez for all the laughs, fun, and support. I wish to thank Dr. Ian Silver in particular for helping me develop my methodological approach in chapter 8. I would also like to give a special shout out to Cheryl Johnson and Jordan Papp who have been such amazing friends. Thank you!

I am also so grateful for my marathon running “tribe” whom I met through the Tristate Running Company. You all became like family to me after moving a long way from home and helped me achieve things I never thought I was capable of. Thank you all! I also have much gratitude to Naomi Matley and Sarah Rasnick for helping me become stronger than I ever thought possible. Jason Miklic, Sophy Kdep, and the entire Cincinnati west coast swing dance community also deserve thanks. You always greeted me with smiles and enthusiasm. Dancing with all of you was one of my favorite forms of escapism from school. I would like to thank Joe Millea for being my rock throughout much of this process. I also wish to acknowledge the entire Millea family for always making me feel welcome. Thank you all!

I would like to thank people from Simon Fraser University who have supported me throughout my graduate career. To Dr. Martin Andresen, thank you for your continued mentorship. I am so grateful that you introduced me to environmental criminology, taught me how to publish, and gave me timely advice while on the job market despite being thousands of kilometers away. I am still so proud to be one of your padawans! And thank you to Dr. Sheri Fabian. I honestly do not know if I would have pursued graduate school had you not taken the time to sit me down and convince me that I had what it takes. I also appreciate learning about qualitative research from you, it was invaluable to this dissertation. I would also like to thank Dr. Paul Brantingham, Dr. Patricia Brantingham, Dr. Gail Anderson, Dr. Garth Davies, Dr. Margaret Jackson, and Dr. Bryan Kinney for guidance throughout my graduate career. I would also like to acknowledge Sadaf Hashimi, Dr. Ashley Hewitt, Dr. Adam Vaughan, Dr. Kathryn Wuschke, Monica Ly, Allison Campbell, Stephanie Dawson, Edith Wu, Cristina Pastia, Stephanie Lau and Dr. Evan McCuish for continuing to be such great friends even after my departure from SFU.

I am indebted to my friends Raisa Payment, Alex Mackay, Naemi Fiechter, Kelsey McIntosh, Sam Tiessen, Kirstie Strange, and Cheryl Zurowski. It is challenging to maintain relationships when you live so far apart. However, I always feel like we pick up right where we left off even after being apart for months at a time. I cannot begin to tell you how much your friendship means to me. Thank you!

Finally, I wish to thank my family. To all my grandparents, aunts, uncles, and cousins, you are just the best. I am always so happy when I get to visit with you and appreciate the messages and well-wishes you have sent to me throughout this process. My greatest appreciation is due to my parents and brother. You three are the reason why I managed to make this dream a reality. Thank you for being so supportive and encouraging me to pursue this opportunity even though it was far away from home. I never could have done it without you. No matter what happened I knew you were always rooting for me and that I could always turn to you when I needed encouragement. I cannot thank you enough for being the most loving and supportive family a girl could ask for. Thank you!

This research was supported by the Social Sciences and Humanities Research Council of Canada (SSHRC).

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I.
WHOSE EYES?

> "*The high-rent tenants, most of whom are so transient we cannot even keep track of their faces, have not the remotest idea of who takes care of their street, or how*" (Jacobs, 1961, p. 39).

Jane Jacobs may be dead, but she is not done.[1] "Eyes on the street" has become Jacobs' (1961) criminological legacy, albeit an undeservingly weak one. Most criminological writings portray "eyes on the street" as many residents actively using city sidewalks, which increases surveillance, guardianship, and collective efficacy within a neighborhood (Browning et al., 2010; Hope, 1995; Perkins et al., 1992; Smith & Clarke, 2012; Tonry & Farrington, 1995; Wilcox et al., 2018; Wortley & Townsley, 2017). This concept is also believed to have inspired Newman's (1973) groundbreaking work on defensible space (Borrion & Koch, 2019; Browning et al., 2017; Clarke, 1995; Cozens, 2008; Mawby, 2017; Merry, 1981; Taylor & Gottfredson, 1986) and Jeffery's (1971) concept of crime prevention through environmental design (Lab, 2016).

In this dissertation I argue that Jacobs' (1961) work has been misinterpreted by criminologists. I believe her ideas highlighted the importance of proprietary places in the creation of neighborhood and city safety. However, these ideas have been obscured by decades of misinterpretation. Many dismissed her work due to her extensive use of examples (Cozens, 2008; Harris, 2011; Mawby, 1977). Yet, when these examples are considered in conjunction with her theory, they point to a very different message about street safety. In light of recent findings in the crime and place research, I argue Jacobs' (1961) ideas provide a new framework by which we can examine neighborhood crime. This dissertation explores the misinterpretations of her work, provides a revised Neo-Jacobian perspective for high crime neighborhoods, and tests this approach using data from Cincinnati, Ohio.

[1] Credit for "dead but not done" goes to Dr. Francis T. Cullen (see Cullen, 2015, p. 13).

I argue that the misinterpretation of Jacobs' (1961) work stems largely from the lens with which it has been interpreted and because her ideas have been linked closely to those of Oscar Newman (1973). After many years with the New York Housing Authority, Newman (1973) argued that the design of the physical environment can incite residents to take ownership of space beyond the confines of their apartments. However, empirical work evaluating this idea has suggested that defensible space is not effective in all contexts (Mawby, 1977; Mayhew, 1979; Merry, 1981; Taylor & Harrell, 1996). Merry (1981) found that even in instances where residents observed crime, they were reluctant to intervene due to their belief that the police were not effective and would not back them up. There was also a fear that offenders would retaliate against those who tried to intervene thus discouraging such behavior, especially toward people who were strangers to these residents (Merry, 1981). Moreover, his work assumed that strangers were the people most likely to offend. Subsequent research discovered that residents of these complexes were often the culprits (Mawby, 2017).

Consequently, because they highlight the importance of urban design, both Jacobs' and Newman's ideas have been largely disregarded by criminologists. And by comparison to Newman (1973), Jacobs' (1961) work has received much less attention. In fact, some scholars make no reference to her work (e.g., Bursik & Grasmick, 1993; Kornhauser, 1978; Taylor, 2015). In most other cases, "even when Jacobs's work is acknowledged, many writers pay scant attention to the significance of it, briefly mentioning it in passing, which in many cases occupies a sentence or two at best, a footnote at worst" (Ranasinghe, 2011, p. 65; for examples, see Jeffery & Zahm, 1993; Lab, 2016; Perkins et al., 1992; Sampson, 2012; Skogan, 1990; Weisburd et al., 2012). But what if criminologists got it wrong? What if they misinterpreted Jacobs' because of the criminological perspectives available at the time? What if Newman did not operationalize

Jacobs work (Cozens & Hillier, 2012; Mawby, 2017) and she was suggesting an entirely different strategy to address crime?

Linking Jacobs (1961) to Newman (1973) is problematic because they did not argue the same things. Although both shared the view of exerting control by increasing surveillance of places, they did not attribute that control to the same people. Newman's (1973) ideas were focused on the *residents* of public housing communities. Conversely, Jacobs (1961) spoke largely of *shopkeepers*. There is a fundamental difference between these types of people. Residents of public housing communities do not own the property that they use. However, shopkeepers are either the owners or managers of their property.

The misinterpretation of Jacobs' work is completely understandable given the time in which it was released. Her book *The Death and Life of Great American Cities* (1961), proposed urban policies that were ahead of their time. It openly attacked the mainstream thinking of urban planners who believed in separating residential from commercial and industrial places and who proposed establishing new developments for older parts of cities. Instead, Jacobs (1961) argued for the mixing of land use types that fostered vibrant urban spaces and reinvestment in old buildings located in densely packed neighborhoods. Many rejected her ideas because: she was a female, non-academic, based her ideas on anecdotal evidence, and challenged traditionally accepted planning theory (Cozens, 2008; Cozens & Hillier, 2012; Graham, 2016; Harris, 2011; Mawby, 1977; Wekerle, 2000). But criminologists may have disregarded her ideas for another reason. They dismissed Jacobs under the presumption that her ideas were the root of defensible space (Cozens, 2008; Cozens & Hillier, 2012; Mawby, 2017; Merry, 1981; Taylor & Gottfredson, 1986), despite little evidence to suggest this is true.

How did this erroneous belief become Jacobs' legacy? At the time of her writing, most criminologists focused on offenders and the causes of criminality and motivation (Clarke, 1980; 1995). Only one school of thought proposed an alternative view that considered geography and the environment: social disorganization theory. Shaw and McKay's (1942) original theory argued that neighborhood conditions such as poverty, ethnic heterogeneity, and population mobility created environments characterized by social disorganization. This meant that residents were less willing to take control of their neighborhood and intervene when crime occurs. This resident-focused approach can be arguably thought of as a 'lens' with which one can interpret Jacobs' work. Using the resident-focused lens, criminologists saw "eyes on the street" as referring to the residents of a neighborhood. By increasing the number of residents present in the streets, you increase surveillance and informal control within a neighborhood.

Once Newman (1973) proposed his concept of defensible space, it drew attention to how the physical design of environments might incite this kind of social control. That is, by creating spaces where residents could tell what areas were theirs, they could identify strangers and be willing to question them. In other words, good environmental design increases surveillance which promotes social control. However, it is unclear why so many believe that defensible space was an elaboration of Jacobs' work. In fact, Newman only refers to Jacobs twice in his book, and arguably only in passing (Mawby, 1977). The first mention simply states Newman's (erroneous) interpretation that Jacobs believed that crime would be lower in areas with greater surveillance by pedestrians or motorists (Newman, 1973, p. 25). The second references Jacobs' suggestion to incorporate commercial buildings into neighborhoods to increase foot traffic in the area. Although Newman refers to these ideas as "unsupported hypotheses", he lobbies for the further

exploration of their underlying causal mechanisms (Newman, 1973, p. 112). Moreover, he never mentions Jacobs in his guide on creating defensible space (Newman, 1996).

Jacobs' (1961) work continues to be viewed using the resident-focused lens (e.g., Browning et al., 2017). However, since the 1980s a new lens has been developing: the owner/manager-focus. This lens, rooted in environmental criminology, is more concerned with how characteristics of the environment create opportunities for crime (Brantingham & Brantingham, 1981; Wortley & Townsley, 2017). Most notably, this lens is not largely concerned with criminal motivation (Andresen, 2014) nor neighborhood social controls among residents, and is instead centered on the opportunities needed to carry out a crime (Clarke, 2004; 1995; Felson & Clarke, 1998). This approach places greater focus on immediate ways to prevent crime. This usually comes in the form of blocking, or better yet removing, opportunities for crime.

One of the fundamental environmental criminology theories, routine activities (Cohen & Felson, 1979), argues that criminal events can only occur if a motivated offender converges in space and time with a suitable target and lack of capable guardianship. Later iterations of the theory re-calibrated the three central elements to offenders, targets, and places. This led scholars to identify a set of controllers for each of these elements, namely handlers, guardians, and managers (Eck, 1994;; 2003; Felson, 1986). Specifically, handlers control offenders from committing crime by keeping them out of trouble. Guardians control targets by trying to protect them. Finally, managers attend to the functioning of the place (Eck & Madensen, 2018).

Place managers are those who have the legal authority to exert control over a place (Eck, 1994). Much recent empirical criminological research has consistently identified the concentration of crime hotspots at few micro-spatial places (Sherman, Gartin, & Buerger, 1989;

Weisburd, 2015; Weisburd, Bushway, Lum, & Yang, 2004; Weisburd et al., 2016; Weisburd, Groff, & Yang, 2012; Wilcox & Eck, 2011). Place management theory has since been used to explain the processes at these hotspots "that make them hot, and how these processes connect to surrounding areas" (Eck & Madensen, 2018, p. 633).

The distinction between those who own or manage property versus those who use it has become paramount in environmental criminology theory (Clarke & Eck, 2005; Eck, 1994; Felson, 1995). Residents of rental properties have limited legal control over where they live. Thus, even if they wanted to alter the place to improve security, they typically have no true authority to do so. On the other hand, property owners have a vested interest in the overall functioning of their property (Eck & Madensen, 2018). And, they have legal powers to dictate what occurs on the premises. If crime threatens the overall functioning of their place, the owners have the motivation and authority to act.

Jacobs (1961) did stress the importance of increased foot traffic by residents and passersby, particularly on sidewalks. These pedestrians are drawn to the street by shops operated by place managers. For instance, she believed that

> the basic requisite for such surveillance is a substantial quantity of stores and other public places sprinkled along the sidewalks of a district; enterprises and public places that are used by evening and night must be among them especially. Stores, bars and restaurants, as the chief examples, work in several different and complex ways to abet sidewalk safety (Jacobs, 1961, p. 36).

To her, safer areas contain a mixture of stores and public places that promoted eyes on and upon the street to discourage wrongdoing. However, most of her examples illustrate shopkeepers as the primary actors who took control over the streets.

In a very dramatic example, Jacobs (1961, pp. 38-39) describes the action of owners during a dispute between a man and little girl on the street beneath her apartment. She recounts the man appearing to convince the girl to leave with him. When deciding whether to intervene,

Jacobs realized that it would not be necessary because numerous shopkeepers—including the owners of the butcher, delicatessen, bar, locksmith, fruit stand, and laundry shops—came onto the street. She described that the shopkeepers surrounded the man to prevent him from taking the girl, despite not knowing who she was.[2] Moreover, she notes that no one from any of the apartments above appeared in their windows to survey the street. Intervention occurred solely by property owners. Jacobs' (1961) accounts of surveillance on city streets by shopkeepers can be considered a precursor to what is now place management theory[3] (Eck, 1994).

With this alternative owner/manager-focused lens, we can view Jacobs' (1961) work in a very different way. The original resident-focused lens suggested that Jacobs viewed neighborhood crime as the product of low social control, or collective efficacy due to poor surveillance and guardianship by residents (Browning et al., 2010; Hope, 1995; Perkins et al., 1992; Tonry & Farrington, 1995; Wilcox et al., 2018; Wortley & Townsley, 2017). However, the new lens suggests that crime at hotspots within neighborhoods can be largely attributed to poor place management practices (Eck & Madensen, 2018; Sherman, Gartin, & Buerger, 1989; Weisburd, 2015; Weisburd et al., 2016; Wilcox & Eck, 2011). That said, an understanding of the mechanisms by which place managers control property is still in relatively infant stages. Furthering our knowledge of these mechanisms and how much place management can account for neighborhood-level crime patterns is the focus of this dissertation. If my interpretation of Jacobs' (1961) work is correct, then place management will account for a substantial amount of the variation in crime across neighborhoods.

[2] Note: Jacobs eventually recounts that the man turned out to be the little girl's father. But at the time of the altercation, the shopkeepers did not know who either party was.
[3] Note: Despite being the first to propose the concept of place management (Eck, 1994), John Eck reports not having read Jacobs' (1961) book at the time because he thought that her focus was on residents' control of places (John Eck, personal communication).

Overview of the Dissertation

This dissertation focuses primarily on place management (Eck, 1994), a concept that emerged from environmental criminology (Brantingham & Brantingham, 1981) including routine activities theory (Cohen & Felson, 1979), the rational choice perspective (Cornish & Clarke, 1986), crime pattern theory (Brantingham & Brantingham, 1993), and situational crime prevention (Clarke, 1997). Collectively and individually, these theories provide contrasting explanations for crime at places relative to community criminology that includes social disorganization theory (Shaw & McKay), the systemic model (Sampson & Groves, 1989), and collective efficacy theory (Sampson, Raudenbush, & Earls, 1997).

I begin by describing the two streams of place-based research: the macro-spatial social disorganization-based approach and the micro-spatial crime at place approach. Chapter 2 provides a historical overview of the theory and empirical research of both streams. This includes a discussion of how both approaches explain variation in crime across neighborhoods. Chapter 3 challenges the previous criminological interpretations of Jacobs' (1961) work. Specifically, it summarizes her overall views on good urban planning practices, the reasons why her works should not be coupled with Newman's (1973), and my re-interpretation of her ideas using an environmental criminology lens. Chapter 4 summarizes the current methods that criminologists use to study variations in neighborhood crime and then presents a Neo-Jacobian perspective to examining this problem.

Chapter 5 describes the studies contained in this dissertation as well as a description of Walnut Hills, the specific neighborhood studied in the following two chapters. Chapter 6 contains the qualitative study that examined the mechanisms of place management occurring in Walnut Hills. Chapter 7 examines changes in crime trends in Walnut Hills as it undergoes place-

based redevelopment. This includes a description of the redevelopment strategy being used in the neighborhood as well as how these changes are impacting crime within the neighborhood. Chapter 8 describes a quantitative study exploring how much of the variation in crime across neighborhoods in Cincinnati, Ohio can be attributed to resident- versus owner/manager-based effects. Lastly, chapter 9 provides the overall conclusions of the Neo-Jacobian perspective, the studies that test it, and directions for future research.

CHAPTER II.
EXPLORING JACOBS WITH DIFFERENT LENSES

> "*…there must be eyes upon the street, eyes belonging to those we might call the natural proprietors of the street…[and] the sidewalk must have users on it fairly continuously, both to add to the number of effective eyes on the street and to induce the people in buildings along the street to watch the sidewalk in sufficient numbers*" (Jacobs, 1961, pp. 35).

For nearly a century, criminologist have investigated the impact of geography on crime. Although some preliminary spatial research was conducted in the early 19th century (Guerry, 1933; Quetelet, 1842), the spatial patterns of crime were not seriously considered again until the work of Shaw and McKay (1942). Since the arrival of social disorganization theory, two streams of geographically-focused research have emerged: community criminology and environmental criminology. I will call these the resident-focused and owner/manager-focused lenses. Both provide lenses with which to interpret Jacobs' (1961) work. While both lenses focus on the importance of geography, they provide varying explanations for how and why crime occurs. Moreover, each lens also assumes different definitions of what constitutes a place (see Madensen & Eck, 2012).

Early variants of community criminology are rooted in social disorganization theory (Shaw & McKay, 1942). Social disorganization refers to "the inability of a community to realize common goals and solve chronic problems" (Kubrin & Weitzer, 2003, p. 374). Shaw and McKay's (1942) theory posits that neighborhood crime is the product of the "weak capacity for informal social control" and institutional means to control delinquency and gang formation (Wilcox & Tillyer, 2018, p.123). Although social disorganization theory originally provided an explanation for criminality (Bursik, 1986a), later work using this perspective expanded to explain crime events in large areas, neighborhoods, and communities (e.g., Sampson & Groves, 1989; Veysey & Messner, 1999). Environmental criminology has always focused on crime

events, but at varying spatial scales (Brantingham, Dyerson, & Brantingham, 1976). It is concerned with criminal events and how characteristics of the environment create opportunities for crime. Most recently, research in this area has focused on crime at a micro-spatial scale, particularly at places.

In this dissertation, I consider how these two lenses account for differences in crime events across neighborhoods. Specifically, I explore how place management contributes to crime within neighborhoods. As such, this literature review is separated into three chapters and is structured in the following way. In this chapter, I begin by discussing the history and evolution of social disorganization theory. This includes the early work of Shaw and McKay (1942) as well as the systemic model (Sampson & Groves, 1989) and collective efficacy (Sampson et al., 1997) theories that have since emerged. It also includes an examination of how Jacobs' (1961) work was interpreted according to this lens. Next, I discuss the arrival of environmental criminology. This includes a review of its three core theories and how they drew attention to criminal events and crime opportunities. Third, I summarize places and place management theory. Specifically, I discuss how "places" are defined according to these lenses followed by an examination of how place management in criminology emerged. Moreover, I describe the studies showing the clustering of crime hotspots within neighborhoods. I will then return to Jacobs (1961) in chapter 3 and describe the Neo-Jacobian perspective of place and neighborhood crime.

Origins of the Resident-Focused Lens

Research from the Chicago school is rooted in the ecological perspective. It argues that human behavior is highly dependent on the interactions between organisms and their environment (Bursik, 1986b; Byrne & Sampson, 1986; Stark, 1987). It also suggests that the physical organization of cities emerges via natural, organic processes. In the early 1900s,

scholars began noting a distinct set of areas that most major cities seemed to have. As Light (2009) describes in her summary of the social scientific opinion of the time:

> "Every large city tends to have its Greenwich Village just as it has its Wall Street," Robert Park explained citing the work of Eugenius Warming. "Every great city has its racial colonies, like the Chinatowns of San Francisco and New York, the Little Sicilies of Chicago," echoed Columbia University sociologist Nels Anderson. Such findings confirmed the possibility of developing a generalizable scientific model of cities (Light, 2009, p. 12).

Consequently, many believed that "persistent patterns of urban activity, such as commerce, industry, residential patterns, and unconventional behaviors including crime and delinquency" are considered relatively predictable (Messner & Zimmerman, 2012, p.157). This approach argues that all organisms in these environments become interdependent and are adapted to their environments. Moreover, some believed that the segregation of racial and class groups could be explained via symbiosis or competitive cooperation (Light, 2009).

Park and Burgess' (1925) concentric zone model is an example based on the ecological framework. They argued that urban inhabitants, like organisms in the world, are constantly competing for and redistributing resources. In the early 1900s, as Chicago was undergoing rapid industrial and geographic expansion, they observed that as the central business district grew it began pushing more residences further out creating concentric zones of development. However, a result of this process was the creation of a so-called "zone of transition" characterized by mixed residential and commercial use. This zone was an undesirable place to live, so people with higher incomes moved to suburban areas further from the pollution, noise, and smells generated from factories. Moreover, because of the city's rapid expansion, individuals who owned property in this zone were investing little into their properties with hopes to sell them in the near future for re-zoning into commercial use. This led to poor living conditions that were drastically different from the primarily residential suburban areas further away. There were also fewer legitimate opportunities for economic success among residents and many cases of job discrimination.

Shaw and McKay (1942) applied the ecological approach to the residential locations of juvenile offenders. They used Park and Burgess' (1925) process of growth ideas within their theory of delinquency arguing that criminogenic neighborhoods naturally emerge as cities expand. They specified that

> the general character of these [growth] processes, noting that every American city of the same class tends to reproduce in the course of its expansion all the different types of areas that these tend to exhibit, from city to city, very similar physical, social and cultural characteristics, leading to their designation as "natural areas" (Shaw & McKay, 1942, p. 18).

When comparing Park and Burgess' (1925) concentric zone model to corresponding youth court records, they found numerous notable patterns. First, they discovered that the majority of offenders lived near one another and in the aforementioned zone of transition. Second, they found smaller clusters of youth offenders just outside of smaller industrial areas that were beginning to emerge in Chicago. Lastly, the areas with disproportionately more offenders remained stable over many decades. That is, regardless of any change in the characteristics of the people who lived there, the criminogenic places remained consistently problematic. This led them to conclude that something about the area, not the people living there, was the ultimate problem (Shaw & McKay, 1942).

To explain the clustering and stability of these crime trends, Shaw and McKay (1942) proposed their theory of social disorganization. Within it, they argued that specific structural factors were the driving causal force behind these crime patterns. More specifically, areas characterized by high poverty, residential mobility, and ethnic heterogeneity were more likely to have higher crime rates. First, impoverished areas did not possess the resources needed to influence and sustain the social, political, and economic conditions needed to encourage prosocial behavior and community cohesion. Inferior living conditions also led to high residential mobility because residents were always seeking to move to better areas once they had

the financial means to do so. Thus, many residents did not stay in the neighborhood for very long. Lastly, most of the individuals came from rural areas of the United States or other countries altogether. This meant that many people coming from various cultures and often speaking different languages were less able (or willing) to determine a common set of norms or values (Shaw & McKay, 1942). All of these structural factors were thus seen as correlates to crime and delinquency because these areas had weak social controls (Messner & Zimmerman, 2012). Consequently, criminal and deviant activities, particularly among youth, became the norm in these areas with little means to regulate conduct.

The Emergence of Defensible Space. Until Ruth Kornhauser's (1978) re-examination of Shaw and McKay's (1942) original work, research in this area was scant. Most studies on social disorganization theory did not re-emerge until the 1980s (Kubrin & Weitzer, 2003). Given the dormancy of this theory in the 1960s, few criminologists focused on the importance of geography on crime, including Jacobs' (1961) ideas regarding urban design and safety. This began to change when Oscar Newman (1973) released his work on defensible space. After working with the New York Housing Authority, Newman (1973) believed that the strategic design of public housing communities could reduce crime. He observed that many buildings that experienced more crime tended to share similar characteristics. Specifically, they were often high rises with more than six floors in the building, their main entrances were not within view of the street or sidewalk, the stairwells were sound-proof, and there were multiple doors servicing the building that could be accessed by anyone. These characteristics allowed for the easier passage of offenders through these buildings to carry out their crimes and evade police via convenient escape routes. Newman (1973) argued that many of these problems were the product of the physical design of the buildings and that architects were not taking crime into consideration

despite design options available to them. In fact, he posited that there were often multiple ways to design a structure that accomplished the same goals and that alternatives that can avoid providing the opportunity structures to support crime.

Through three basic principles, Newman (1973) proposed the concept of defensible space. The concept argues that the design of the physical environment incites residents to take ownership of space beyond the confines of their apartments, allows them to identify outsiders, and makes potential offenders feel uncertain about their risk of detection. First, he advanced the idea of territoriality which argued that delineating where private space ends and public space begins, such as the use of gates, fences, or street design, allows residents to recognize strangers who may be up to no good. He also thought these symbolic barriers signaled a sense of ownership to offenders that would deter them from offending because people would likely take notice and/or intervene. Next, he believed that surveillance by residents was critical in keeping crime in check. It was not necessarily enough that delineating what space belong to the residents and allowing them to see who belong and who did not, could reduce crime. The housing units also needed to strategically place windows to facilitate the monitoring of activities taking place in the complex. Lastly, he argued that the image and milieu of a building's design also signaled whether the property was an easy target for crime. More specifically, he believed that many design characteristics of these buildings, such as its high-rise design and use of glazed tiles for easy graffiti removal, were distinct and made them readily identifiable as public housing.

Scholars became interested in how Newman's (1973) idea of physical design could increase social control among residents. Much of these ideas fit with the social disorganization lens. That is, the design of areas could provide residents with the means to monitor behavior in

their community and take action when it threatened their living space. In other words, well-designed communities were more likely to be socially organized.

Given these three concepts, many drew parallels between the work of Newman (1973) and Jacobs (1961). A commonly cited passage by Jacobs (1961) has spurred much of these interpretations. She wrote that:

> A city street equipped to handle strangers, and to make a safety asset, in itself, out of the presence of strangers, as the streets of successful city neighborhoods always do, must have three main qualities:
>
> First, there must be a clear demarcation between what is public space and what is private space. Public and private spaces cannot ooze into each other as they do typically in suburban settings or in projects.
>
> Second, there must be eyes upon the street, eyes belonging to those we might call the natural proprietors of the street. The buildings on a street equipped to handle strangers and to insure the safety of both residents and strangers, must be oriented to the street. They cannot turn their backs or blank sides on it and leave it blind.
>
> And third, the sidewalk must have users on it fairly continuously, both to add to the number of effective eyes on the street and to induce the people in buildings along the street to watch the sidewalk in sufficient numbers (Jacobs, 1961, p. 35).

Based on the above third quality, many scholars believed that Jacobs' (1961) concept of "eyes on the street" referred to resident surveillance of neighborhoods, similar to Newman's (1973) concept of surveillance. In the quote above, she also spoke of the importance of a demarcation between public and private space. This can be similarly read in Newman's (1973) concept of territoriality. Thus, many scholars believed that Jacobs' (1961) work was the inspiration for Newman's (1973) defensible space (Borrion & Koch, 2019; Browning et al., 2017; Clarke, 1995; Cozens, 2008; Mawby, 2017; Merry, 1981; Taylor & Gottfredson, 1986).

Once Newman's (1973) ideas regarding physical design and informal social control among residents emerged, scholars interpreted Jacobs' (1961) work similarly using the resident-focused lens. Some have generated sets of Jacobs-inspired principles to describe how to make streets safer through informal social control by residents. For instance, some interpret Jacobs' (1961) attack on traditional urban planning strategies as an overall testament to the importance of

resident behavior (Wilcox, Cullen, & Feldmeyer, 2018). Many believe her ideas highlighted that "the differentiation and segregation of residential environments from other land uses, was undermining residents' ability to cope with and regulate urban diversity" (Hope, 1995, p. 42).

Other scholars have commented on how Jacobs' (1961) ideas refer to specific ecological, resident-based crime prevention mechanisms. For instance, crime can be reduced when we "orient buildings to encourage surveillance by residents" (Taylor & Gottfredson, 1986, p. 398). Moreover, the concept of "eyes on the street" implies surveillance "whereby residents have enhanced opportunities to self-police the streets…" (Cozens, 2008, p. 154). Others have argued that Jacobs' (1961) believed that "the attitude of residents toward control in 'their' area and visibility through presence" were crucial to combatting urban crime (Mawby, 1977, p. 170). And some scholars posit that Jacobs (1961) "observed that the safest areas appeared to be buildings that were physically oriented for natural surveillance by residents" (Perkins et al., 1993, p. 30). Oftentimes, scholars argue that Jacobs (1961) attributed crime reduction through natural surveillance which fostered social cohesion (Smith & Clarke, 2012).

The Systemic Model and Collective Efficacy. By the 1980s and 1990s, interest in social disorganization theory was revived and numerous theoretical and empirical works using this resident-focused lens have emerged. Most notably, Kornhauser (1978) revived interest in the theory when she re-interpreted Shaw and McKay's (1942) work. She argued that they erroneously integrated a mixed model of three perspectives, namely strain, cultural deviance, and control theories whose basic tenets were essentially incompatible. She pointed out that while strain theory argues that the motivation for crime varies among people, control theories posit that criminal motivation is ubiquitous and only deterred if sufficient controls are imposed upon them. Kornhauser (1978) believed that one of these perspectives had to be chosen in order to provide a

more coherent theory and advocated for the latter. To her, basic human needs and impulses had the potential to drive all people toward offending, but most refrain from it because of the social controls present in their lives.

This re-interpretation renewed interest in social disorganization theory (see Bursik, 1988; Bursik & Grasmick, 1993; Sampson & Groves, 1989; Stark, 1987). Specifically, the systemic model was proposed by Sampson and Groves (1989) as a means to operationalize Kornhauser's (1978) concept of control using ideas presented by Kasarda and Janowitz's (1974). Their original model characterized socially organized communities as those with strong networks of people. They believed that highly organized neighborhoods possessed the social structures needed to strengthen ties between networks of people and essentially socialize people within the community to ascribe to desired, non-criminal behaviors. In other words, the strength of networks among residents and their ties to others served as the primary mechanism to control crime. However, subsequent tests of this model have yielded mixed results and many studies have shown relatively weak empirical support for the line between crime and social ties (see Bellair, 1997; Pattillo, 1998; Warner & Wilcox Rountree, 1997; Wilcox Rountree & Warner, 1999).

About a decade after the systemic model was first proposed, Robert Sampson introduced a new concept to community criminology: collective efficacy. During the data collection period of the famous Project on Human Development in Chicago Neighborhoods (PHDCN), the research team included items to measure social cohesion and informal social control. When Sampson, Raudenbush, and Earls (1997) analyzed the data they found that the two specific constructs were "closely associated across neighborhoods… [suggesting] that the two measures were tapping aspects of the same latent construct" (p. 920). From this discovery, they developed

the now famous concept of collective efficacy. This new theory differed from the systemic model in that it emphasized not only the importance of social cohesion and social ties in a neighborhood, but also peoples' actual willingness to intervene and engage in social control. Specifically, collective efficacy is defined as the "social cohesion among neighbors combined with their willingness to intervene on behalf of the common good" (Sampson et al., 1997, p. 918). From this, Sampson et al. (1997, p. 918) believed that "residents themselves achieve public order". As discussed above, because social ties were found to either increase or decrease crime depending on the context being studied, Sampson (2006) argued that researchers had to determine whether the cohesion present in a neighborhood was prosocial and actually made individuals willing to intervene. To Sampson, the latter was not being given sufficient attention in the literature. Despite the revisions to collective efficacy theory, the empirical results only moderately support its explanatory capabilities (Mazerolle, Wickes, & McBroom, 2010; Sampson, Morenoff, & Raudenbush, 2005; Wright & Benson, 2011).

Research using social disorganization and its offspring theories persist to this day. Not surprisingly, interpretations of Jacobs' (1961) work using the resident-focused lens continue as well. Most recently, an article in the field's top journal—*Criminology*—argues that Jacobs (1961) thought that "well-functioning neighborhoods also foster public contact among residents" (Browning et al., 2017, p. 758). They believe that her "model offers an ecologically grounded approach to understanding the establishment of neighborhood-level collective efficacy with respect to the control of public space" (Browning et al., 2017, p. 758; see also Browning et al., 2010).

Social disorganization theory continues to influence much of the contemporary criminological literature. It informs research in community crime prevention (Bullock &

Fielding, 2017; Hope, 1995; Rosenbaum & Schuck, 2012) and explanations of crime across neighborhoods (Kubrin & Wo, 2016; Messner & Zimmerman, 2012). Thus, it is not surprising that many have used this resident-focused lens to interpret Jacobs' (1961) work. However, since the 1980s a new lens has been developing: environmental criminology. Despite its emergence, few seem to have interpreted Jacobs' (1961) work accordingly. I argue that many of the examples she provides can be strongly linked to place management theory, a subsidiary theory of environmental criminology. Moreover, these examples can arguably inform a new means to explain differences in crime rates across neighborhoods. The next section describes the emergence of this new lens and the empirical evidence that indicates its theoretical relevance to contemporary criminology.

Origins of the Owner/Manager-Focused Lens

Although traditional criminologists have been concerned with criminality (Clarke, 1995; 1980; Wilcox & Tillyer, 2018), crime involves more than just offenders (Brantingham & Brantingham, 1981). Criminal events possess four basic, yet necessary dimensions: offenders, victims, places, and the law (Brantingham & Brantingham, 2001). Environmental criminology is largely focused on place, where and when crime occurs, as well as how characteristics of the environment create opportunities for crime (Brantingham & Brantingham, 1981; Wortley & Townsley, 2017). Most notably, the discipline is not largely concerned with criminal motivation (Andresen, 2014) and is instead centered on the opportunities needed to carry out a crime (Clarke, 1995; Felson & Clarke, 1998).

Environmental criminology can be broadly defined as the study of the "discrete location in time and space…in which a criminal event occurs" (Brantingham & Brantingham, 1981, p. 7). To properly understand these patterns, environmental criminologists seek to determine: "where and when crimes occur…the physical and social characteristics of crime sites…the movements

that bring the offender and target together at a crime site…[and] the perceptual processes that lead to the selection of crime sites", among other things (Brantingham and Brantingham, 1981, p. 7). Thus, environmental criminology set out a framework that was distinct from the typical criminological approach (Sidebottom & Wortley, 2016). Instead, it uses an applied approach to understand criminal events that is problem-led and policy driven (Clarke, 2004). Consequently, this discipline is focused on criminal opportunity and is thus concerned with the *how* as opposed to *why* of crime.

There are three theoretical perspectives considered to form the "bedrock of environmental criminology" (Sidebottom & Wortley, 2016, p. 161). They include: routine activity approach (Cohen & Felson, 1979), crime pattern theory (Brantingham & Brantingham, 1981; 1993) and the rational choice perspective (Clarke & Cornish, 1985). Interestingly, although scholars developed these perspectives independently, they are inter-connected and examine similar themes (Felson, 2017). That is, they share the same goal of explaining criminal events through influence by the immediate environment (Wortley & Townsley, 2017).

The Routine Activities Approach. Although it was not published until 1979, development of the routine activities approach began in the early 1970s much closer to the release of Jeffery's (1971) and Newman's (1973) work. In fact, from the time Marcus Felson had completed the first draft of the paper, it took over three years and rejections from six of the leading criminology journals before it was published (Felson, 2017). At the time, many criminology theories typically attributed crime to financial strain or economic disparity (Merton, 1938; Cloward, 1959). However, after World War II, crime rates in westernized countries continued to increase despite coinciding economic and social prosperity. This compelled Cohen and Felson (1979) to re-think what the conditions for crime truly are. In the end, they settled on a criminal event-focused

explanation. Specifically, they argued that for a "direct-contact predatory violation" to successfully occur, the spatio-temporal convergence of a motivated offender, suitable target, and lack of capable guardianship was necessary (p. 590). This proposition had a fundamental policy implication, namely that to prevent a crime, a strategy need only block one of these elements. That is, keeping these elements from converging would eliminate the sufficient opportunity needed to commit a crime.

Cohen and Felson (1979) pointed out that during this time of economic prosperity, unemployment was decreasing, wages were increasing, and women were entering the workforce at an unprecedented rate. Thus, not only were more people employed, but they were earning more disposable income that permitted them to engage in leisure activities outside of the home. In turn, this increased their probability of encountering motivated offenders. It also meant that fewer people stayed at home during the day thus decreasing guardianship of their property. Moreover, technological innovation was booming and producing products that were more desirable because they were smaller, lighter, and thus easier to steal. In other words, suitable targets were increasingly present in society. There were more people out in society to rob or assault, as well as more desirable items to steal from unguarded homes. In other words, "opportunities for crime are increased by attenuated guardianship" (Pratt & Cullen, 2005, p. 413).

The routine activities approach provided both a micro- and macro-level explanation for why crime rates emerge (Felson, 2017). Crime rose because there were more things to steal and less protection for them. However, at a micro-level, the three key elements of the theory defined how crime events occur and what needs to be done to prevent them. The micro-level explanation of routine activities has since evolved. By the mid-1980s, Felson (1986) introduced the concept

of offender handlers. These persons were considered those with ties to offenders that could keep them from offending. Examples include parents, siblings, friends, or teachers. Shortly thereafter, Sherman et al. (1989) published their landmark study of crime at places. Their findings indicated that half of all crimes at street segments occurred at 3.3% of places in Minneapolis. Although the concept of place was implied in Cohen and Felson's (1979) original theory (see also Felson, 1987), it was not explicitly stated as a key element. Places were important because they were the setting in which a motivated offender and suitable target converged in the absence of capable guardianship.

The importance of micro-spatial places was strengthened further by Eck's (1994) introduction of place managers. Within his dissertation research, he found that apartments with poor property managers often experienced the most crime. Thus, just as Felson (1986) proposed handlers to govern offenders, Eck (1994) proposed that managers governed places. By the early 2000s the routine activities approach was updated (see Eck, 2003; Felson, 1995). This re-development of the theory pushed guardians out as an inner component to crime events to an outer controller of targets. Places then became one of the central three elements. The revised theory was first depicted by Eck (2003) in the crime triangle. Of the three core elements (offenders, targets, and places), each had a controller[4] (handlers, guardians, and managers, respectively). Similar to the original theory, the inner three elements are required for a crime to occur. The addition of the outer triangle depicts actors that could prevent crime.

The Rational Choice Perspective. Shortly after routine activities theory emerged, Clarke and Cornish (1985) considered offender decision-making processes as part of their influential rational choice perspective. In efforts to present a theory that was more pragmatic to

[4] Note: Marcus Felson refers to these individuals as monitors (see Felson, 1995).

practitioners, they argued that "offenders make rational choices" (p. 153) regarding each step of their criminal endeavors. Thus, if we wish to prevent crime, we should focus on the offender's "goal and how [s/he] tries to achieve it" (Cornish & Clarke, 2017, p. 29). Moreover, regardless of the types of crimes offenders engage in, their decision-making processes vary depending on the type of offense being considered. Consequently, practitioners need to implement crime-specific strategies that target the opportunities for particular offense types.

Clarke and Cornish (1985) then present a model consisting of four main components to best understand this decision-making process for offenders. First, they explain that offenders need to have a certain level of readiness for crime whereby they have actually contemplated committing an offense. Next, they must actually decide to commit the offense. This can often be determined through peer associations or while intoxicated. Offenders must then select the target that they wish to offend against, and they use cues from the environment during their selection process. This means that their perceptions of target suitability are extremely important in predicting which ones will be selected over others. Lastly, there is the aspect of continuance whereby offenders' decisions to continue offending are largely driven by positive reinforcement. Thus, if they select a target based on a particular set of characteristics and their crime is a success, they will continue to offend using this template in the future (Clarke & Cornish, 1985).

Crime Pattern Theory. Shortly after the rational choice perspective emerged, Brantingham and Brantingham (1993) published a seminal piece that provided explanations as to how offender select their targets. They argued that it was due largely in part to the physical characteristics of environments and the decision-making processes that people frequently engage in. More specifically, they pointed out that even the most prolific offenders spend most of their time engaging in non-criminal behavior. Throughout these daily activities, they travel to and

from various nodes via specific and predictable pathways. These places form their activity spaces and in turn their awareness spaces whereby they are familiar with the physical layout of the places and the routines of the people who frequent them (i.e., potential victims).

Over time, offenders develop internal crime templates in which they interpret cues from the environment in order to determine whether there is sufficient opportunity to commit a crime with as little detection as possible (see also Brantingham et al., 2017). The familiarity and comfort within an environment greatly increases the likelihood of crime because offenders are more aware of the cues emitted from these places. This means that they are unlikely to stray far from their awareness spaces whereby different environments (and targets) are present. As a result, the patterns of mobility of all persons are quite predictable and relatively stable (Brantingham, & Brantingham, 1981, p.238). Moreover, the nodes that people frequent and the paths in which we use to travel between them are static and bound by the design of urban planners. The likelihood of victimization increases if we share them with motivated offenders (Andresen, 2010, p.20). Thus, road network layouts and the physical structures of buildings plays an important part in their suitability/selection process.

Arguably, one of the biggest implications from their theory is that the location of high crime places—or hot spots—can oftentimes be easy to predict. In fact, Brantingham and Brantingham (1999) later argued that if researchers and planners were to overlay the spatial locations of places such as high volume activity nodes, highly used travel paths, and areas of low socio-economic status, high risk places would become readily apparent on city maps. To them, this concentration and predictability of crime is a direct product of the non-random distribution of land use coupled with the non-random movement of people (Brantingham & Brantingham, 1993; 1999; Brantingham et al., 2017).

Around this same time, another dominant stream of place-based research was emerging—crime and place (Eck & Weisburd, 1995; Sherman et al., 1989). As technology improved, scholars could study criminal events at smaller levels of aggregation. Micro-spatial crime concentration has since become increasingly apparent. More specifically, research shows that crime is consistently concentrated within neighborhoods at very few, prolific places such as addresses or street segments (Andresen et al., 2017a; 2017b; Sherman et al., 1989; Lee et al., 2017; Weisburd et al., 2004; Weisburd, Groff, & Yang, 2012). Moreover, these trends are largely consistent with theories of environmental criminology that explain the distribution of crime opportunities at specific places (Brantingham & Brantingham, 1993; Clarke & Cornish, 1985; Cohen & Felson, 1979; Eck, 1994). Consequently, places were becoming key to understanding crime, but few ever characterized what places mean.

What is a "Place"?

Starting with Shaw and McKay's (1942) social disorganization approach and the later environmental criminology theories (Brantingham & Brantingham, 1993; Clarke & Cornish, 1985; Cohen & Felson, 1979), geography is clearly important. However, criminologists often refer to places without specifying any formal definition. This is problematic from a policy perspective because the implications can differ depending on the unit of analysis used. Eck and Madensen (2012) formally labelled the three types of places that criminologists are concerned with: *proprietary*, *proximal*, and *pooled* places. Proprietary places are usually considered land parcels that possess specific addresses and owners. Their use is dictated and regulated by those who own them. These could include individual houses, bars, or shops. Moving to a slightly larger level of aggregation, proximal places usually include a group of proprietary places. The most typical examples are street blocks or segments. That is, a street segment can contain a collection of multiple properties such as apartments, shops, and gas stations. Lastly, pooled

places generally refer to a cluster of proximal places. Most commonly, pooled places are considered more macro-level in nature such as neighborhoods (Eck & Madensen, 2012).

Since environmental criminology theories have emerged, three types of criminal proprietary places have been identified: crime generators, crime attractors (Brantingham & Brantingham, 1995), and crime enablers (Clarke & Eck, 2005). Crime generators are places that experience high crime because they draw large volumes of people to places for purposes other than crime. For instance, sports arenas, shopping malls, and major transit stations draw thousands of people to watch games, shop, and ride public transportation respectively. Having such large numbers of people in a relatively small area increases the likelihood that motivated offenders and suitable targets converge in time and space. Common crimes that tend to occur are assault, pickpocketing, robbery, and theft. Crime attractors are places where something about their characteristics are more conducive to offending. The criminal opportunities in these areas actually attract motivated offenders to travel to them to offend. Examples include bar districts and prostitution areas whereby offenders will actively look for suitable targets (Brantingham & Brantingham, 1995). Lastly, Clarke and Eck (2005) proposed crime enablers, a term to represent places where their managers fail to regulate behavior. Such practices reduce guardianship and increases the amount of criminal opportunities available to motivated offenders.

These theories clearly argue that crime occurs where large volumes of people spend their time engaging in non-criminal activity. They also posit that crime will concentrate at specific micro-spatial places (Eck et al., 2000). As crime pattern theory describes, many of the main activity nodes where people spend time are both shared and clustered together. For instance, entertainment complexes that include movie theatres, restaurants, and bars have become increasingly popular and draw large numbers of patrons. As such, each of these individual places

can act as crime generators (or possibly attractors or enablers). Moreover, these facilities are located next to each other thus creating the potential for a large crime cluster (Eck, 2018a). Crime tends to also be concentrated in a more linear fashion along major roadways and highways. For example, budget motels that can often be used for sex work or other criminal activity are frequently located near highway exits and along arterial roads (LeBeau, 2011). Thus, the most likely way that crime concentrates within neighborhoods are in either "blobs or strings" (Eck, 2018a, p. 166).

Place Management Theory. With the evolution of routine activities theory, the crime triangle, and the classification of places, proper place management has emerged as an increasingly plausible means to combat crime. As previously mentioned, place managers are those who have legal authority (i.e., ownership and property rights) to exert control over a place (see Eck & Madensen, 2018). The owners of properties have the greatest authority, however they will often delegate this to employees. Because they own these places, these individuals possess control over the entire functioning of the property. Consequently, owners can be held legally accountable for what occurs on their property, particularly if it involves crime. For instance, citizens who are criminally injured on their property can bring about a premise liability suit against the owner, provided the incident could have foreseeably been prevented (Eck, 1997). Similarly, local governments can sue property owners using nuisance abatement suits when owners allow their property to be used for crime (Mazerolle et al., 1998). This indicates that under the law, owners can be held legally accountable for the activity on their property because they have control over what occurs on their property. Consequently, place management scholars began examining what constitutes good place management practices.

After Eck (1994) proposed the concept of place managers, Madensen (2007) examined what place managers do. Of primary importance, a place manager's "primary concern is the smooth functioning of the place" (Eck & Madensen, 2018, p. 639). In a business context this might include the exchange of goods or services for money. In a residential context this involves the housing of people, maintenance of property, and exchange of rent. Madensen (2007) specified four central elements to place management: organization of space, regulation of conduct, control of access, and acquisition of resources (also referred to using the acronym ORCA). These elements describe what place managers do with their properties.

The organization of space refers to how place managers "control the physical setting of the place" (Eck & Madensen, 2018, p. 642). This includes which property to purchase and any building situated on it. It also covers the physical layout of the space. Place managers must decide how the space will be used and can manipulate the physical layout to dictate how people move through and behave in a space. Through the selection or renovation of a place, owners dictate where bathrooms are located, where money will be handled, where patrons acquire products, and so forth.

The regulation of conduct is concerned with the rules people are expected to abide by while on the property. Place managers have the authority to decide which "behaviors they encourage, activities they permit, and actions they prohibit" (Eck & Madensen, 2018, p. 642). This is concerned with anything from whether payment is expected before versus after receiving food, to behaviors that are not permitted. For instance, many banks post signs telling patrons to remove their hats and sunglasses upon entrance into a branch.

The control of access deals with who is authorized to be on the property and at what times. Businesses will post hours of operations indicating not only when they are available to

supply resources to patrons, but also when patrons are permitted to use the space. Moreover, managers will encourage certain types of people to use their premises, and often evict those who fail to follow the place's rules. For instance, many bars and nightclubs possess certain themes (e.g., ladies' night) to encourage certain kinds of customers and hire bouncers to eject those who break the rules (Eck & Madensen, 2018; Madensen, 2007).

Lastly, the acquisition of resources refers to assuring a property has enough capital to function. For businesses this comes from their revenue generated which allows them to pay for their staff and the maintenance of the property, among other things. In non-commercial contexts, this can include lobbying the government for sufficient funds or fundraising events to continue operating. Moreover, these places will not be able to attract sufficient resources to operate unless they provide users with a satisfactory experience. Thus, it is in the best interest of place managers to assure the smooth functioning of the place (Eck & Madensen, 2018).

It should be noted that place managers are not primarily concerned with crime, especially if it does not interfere with the overall functioning of their place. Many crime prevention tactics are costly to owners and would not be seen as justified if crime is not occurring on their property. Conversely, some place managers can profit from crime and fail to take steps to prevent it. For instance, the manager of an apartment building might turn a blind eye to drug dealing if the parties involved continue to pay rent in cash. This response is what Eck and Madensen (2018) refer to as passive acceptance. They also state that place managers could also actively facilitate crimes.

Given the current research two points are apparent. First, the law considers property owners accountable for injury endured through crime on their property (Eck, 1997; Mazerolle et al., 1998). This implies that place managers can prevent crime on their property. Second, most

crime happens at very few places (Sherman et al., 1989; Weisburd, 2015; Wilcox & Eck, 2011) and some scholars argue these hot spots are caused by poor place management (Clarke & Eck, 2005; Eck, 1994; Eck, Clarke, & Guerette, 2007; Madensen, 2007). Thus, if crime can be prevented by good place management, these two points raise the following question: why are few places poorly managed, while most are not?

The theory of place management answers this question using three concepts: 1. production of crime, 2. creation of the setting, and 3. influences on management (see Eck & Madensen, 2018). First, crimes are events which occur when people interact within an immediate setting. Negative events, such as crime, "may occur in these environments (e.g., robberies, failure to follow government regulations, customer or employee fraud) and how managers will react to these incidents will depend on the four [ORCA] factors identified in the theory" (Madensen, 2007, p. 161). Moreover, the events that occur within this setting often cause people within them to continue similar behavior. For instance, at sporting events, cheering on teams encourages more cheering. Similarly, a bar fight encourages more people to join in (Eck & Madensen, 2018).

Of great importance to place management theory is the second component: how the setting is created. Madensen (2007) argues that place managers have control over both the social and physical settings of their properties. As per the ORCA principles, the owner must decide what type of business to open, where it should be located, what is the most optimal layout within the space, what type of customers he is trying to attract, among other things. These physical characteristics then contribute to the social setting created by the place. This includes what rules of conduct are expected to be followed by patrons and the atmosphere created by staff members.

In the event that a negative event occurs on the premises, the owner will react according to whom or what s/he is influenced by. At the most basic level, owners will make decisions based on the information they know regarding solutions, the resources they have available, and how much money it will cost them to address the problem. At a larger scale, these decisions can also be influenced by outside sources such as government organizations, the media, community groups, or neighbors (for more information see Sampson, Eck, & Dunham (2010) regarding super controllers). As Eck & Madensen (2018, p. 653) point out, favorable responses to negative events is crucial to place managers "to keep them from recurring and to regain a positive reputation" even if they must expend resources.

Most places are driven to create safe environments that give customers a positive experience and encourages them to return. However, a small number of places fail to create this environment, which typically leads to a persistent crime problem. Eck (2018b) theorizes that poor place management arises from an interaction between economic, social, and political reasons. Although relatively rarely studied, research since the 1960s has indicated that poor management clusters in low income areas (see Desmond, 2016; Salins, 1980; Sternlieb, 1966). This occurs largely due to economic (dis)incentive. The most detrimental economic situation for a landlord is to have high vacancy rates. Thus, these managers are constantly seeking paying residents. However, in a low income area landlords cannot demand large rents. Thus, owners try to make profits by cutting back on things like maintenance. Eck (2018b) argues that although this past research does not directly reference crime (Desmond, 2016; Salins, 1980; Sternlieb, 1966), it likely also applies. Many crime prevention measures are costly (e.g., installing better locks or gates, using surveillance equipment such as cameras). Thus, it seems unlikely that if an owner is

unwilling to address his property's physical features, he will be equally unwilling to invest in crime prevention.

Second, Eck (2018b) argues that social mechanisms can explain where these clusters of poorly managed places are typically located. For many decades, legal and business practices have segregated racial minorities, particularly African Americans, to specific areas in American cities. Well after slavery was abolished, legal documents such as restrictive covenants prohibited the sale of property to African Americans. Moreover, studies have found that real estate agents will show certain properties depending on the buyer's race (Galster, 1990; List, 2004). There has also been a history of mortgage discrimination, particularly against African Americans (Apgar & Calder, 2005; Massey et al., 2016). Consequently, the owners of property in restricted places wield great power over those who have no choice but to live there. These place managers feel fewer incentives and pressures to deliver the same services, care, or attention that would be present in higher income areas (Eck, 2018b).

Lastly, Eck (2018b) claims that a lack of political power can also exacerbate poor place management practices. Lower income areas within American cities typically receive lesser quality government services such as schools and police resources. Eck (2018b) argues that "it is quite likely that this extends to code enforcement, building and health regulations, and other government services that directly influence how places are managed" (p. 173). Although there is little research on the topic, Eck (2018b) suspects that place managers in these poorer areas likely try to influence elected officials to encourage poor place management. For instance, they might request government subsidies for maintaining property that houses the poor, yet hope that inspectors will overlook code violations on their properties. Similarly, they might lobby for redevelopment efforts that would increase the demand and thus value of their properties. Similar

to what Burgess (1925) found in the interstitial zone of Chicago (see also Snodgrass, 1976), this incentivizes owners to hold onto these properties for as long as possible while inputting minimal costs to sell them for a profit afterwards. Thus, while they are waiting to sell, these places likely experience poor place management practices (Eck, 2018b).

Conclusions. Places are clearly important to our understanding of crime events. Over many decades, scholars have begun studying crime at much smaller scales. Since distinguishing between the three overall types of places—proprietary, proximate, and pooled—explanations in environmental criminology have begun focusing more closely on the management of proprietary places. These theories argue that crime occurs at fewer, yet more chronic places, likely due to poor place management. Moreover, they posit that these poorly managed places tend to cluster together. Because place management theory is relatively new, few studies have empirically examined these explanations. However, a small number of studies have shown evidence of clustering of these places. The following section reviews these studies.

Empirical Evidence Demonstrating the Clustering of High Crime Places

Research has shown that crime is highly concentrated and often clusters in either "blobs or strings" (Eck, 2018a, p. 166). One of the most famous pieces documenting this phenomenon was found in Minneapolis, MN. Sherman et al. (1989) found that not only was crime highly spatially concentrated, but that high crime addresses tend to cluster together. In fact, they noticed a distinct trend of crimes "bunched on major thoroughfares… [and]…near each other" (p. 43). A later study in Minneapolis also found 420 "visually connected clusters…[of]…addresses with 20 or more hard crime calls" (Sherman & Weisburd, 1995, p. 631). This implies that criminally problematic places tend to cluster together. Most strikingly, Groff et al. (2010) investigated similar concentration patterns using 16 years of data from Seattle, WA and found that "*chronic high* street segments have the greatest degree of local clustering" (p. 19, emphasis in the

original). More specifically, their trajectory analyses revealed that high increasing crime street segments were "most likely to be near one another" (p. 19) and the "crime free and low stable street segments are the least clustered" (p. 20). Thus, not only do the high crime locations tend to cluster together, but they remain relatively consistent over time. Moreover, crime has also been shown to cluster around certain crime generators such as public parks (see Groff & McCord, 2012).

Most recently, Bowers (2014) has shed insight into the possibility of high crime places exporting crime to surrounding places. Although the presence of risky facilities has been found to generate a disproportionate amount of crime (Clarke & Eck, 2007; Eck et al., 2007; Townsley et al., 2014; Wilcox & Eck, 2011), she argued that few had considered whether they are related to crime in nearby locations. That is, do these risky facilities also tend to have high crime places that immediately surround them? To test this, she proposed two contrasting types of places: crime radiators and crime absorbers. While the former constitutes places that "transmit risk to the external locale" (Bowers, 2014, p. 393), the latter experience crime because of offenses that occur at nearby external locations.

Results from Bowers' (2014) analysis of thefts in the United Kingdom provided support for the crime radiator hypothesis, but not crime absorbers. Not only was there a statistical association between the amount of theft within facilities and the amount of theft committed in the immediate surrounding areas, but she also found that thefts within facilities tended to precede those in the external areas. These results are also congruent with crime pattern theory. Specifically, it is more likely that offenders commit opportunistic offenses around "intended (internal) destinations" when travelling to them, but do not tend to stop in at such internal "facilities when en-route to a street they are targeting" (p. 408). This provides some additional

evidence for why crime tends to cluster at specific nodes and in a more linear/line-like fashion along paths.

One might also argue that the empirical evidence of repeat victimization can also provide meaningful insights to the crime clustering and exportation phenomenon. For instance, data from the British Crime Survey has indicated that high crime areas possess more repeat victims compared to low crime areas (Trickett, Osborn, Seymour, & Pease, 1992; Trickett, Ellingworth, Hope, & Pease, 1995). Research on residential burglary has since revealed that after a home had been victimized, the risk of burglary to the houses immediately surrounding the original (within about 400m) were amplified for about a month (Johnson & Bowers, 2004a; 2004b; Townsley et al., 2003). This phenomenon has been observed in the UK and Australia and has since been termed the 'near repeat' phenomenon (Bowers & Johnson, 2004; Johnson et al., 2007). More recently, scholars have extended their inquiry into this phenomenon with other crime types, particularly motor vehicle theft. Similar to burglary, motor vehicle thefts have also demonstrated an analogous near repeat pattern. That is, once an automobile was stolen, others located close by were at a higher risk of being taken as well (Johnson et al., 2009; Lockwood, 2012).

Given theoretical and empirical evidence for crime concentration in blobs and strings, a question worthy of pursuit is whether high crime places are outright exporting crime to other locations. That is, if crime clusters at nearby places, is offending behavior at one place related to that of adjacent places? To date, the research indicates that this is a likely phenomenon. Observing the clustering of crimes in small areas across multiple years and cities has shown an underlying, perpetual pattern (Eck, 2018a). The above discussion about types of places is of utmost importance here. Although the study of pooled places is useful to understanding crime trends, proprietary and proximal places may be the most applicable units of analysis to answer

this question. That is, an interplay between individually owned properties and their surrounding environment (i.e., street segments) may be at work here. In essence, the "contextual clustering of public-use facilities, especially along or near major roads" (Wilcox & Eck, 2011, p. 475) and "heavy weight high theft facilities" (Bowers, 2014, p. 408) can lead to crime being exported nearby. If crime pattern theory predicts that offenses will cluster at major activity nodes and paths to and from them, it seems likely that several proprietary places that could generate crime will be located close together. It is also possible that a single, prolific place could export crime to its surroundings if this area constitutes common places in which people engage in their routine activities (i.e., nodes or paths).

This may best be illustrated with an example. However, before providing one, the issue of crime displacement should be addressed. Some might argue that because offenses cluster in space, targeting a prolific place will merely compel an offender to commit in immediately adjacent locations. This is not the stance taken here. Much empirical literature has examined crime displacement and found that it is not an overwhelmingly problematic byproduct of crime prevention strategies (Guerette, 2009; Guerette & Bowers, 2009; Weisburd et al., 2006). In fact, oftentimes the diffusion of crime control benefits is often observed after an intervention is implemented (Clarke & Weisburd, 1994).

So how can one argue that high crime places export crime to nearby locations, but that crime displacement is not a likely problem? As seemingly evident from Bowers' (2014) evidence for crime radiators, certain types of offenses might be contingent on activities (both criminal and not) that occur at adjacent places. Now for the promised examples. Robberies might occur outside of rough bars known for high alcohol consumption and assaults by patrons, known drug dealing locations, or even retail stores because of vulnerable targets moving to and from the

location. In each example, people using these facilities may be easy targets because they are intoxicated (Bernasco et al., 2017; Newton & Hirschfield, 2009; Newton & Felson, 2015), unlikely to contact the police (Wright & Decker, 1997), or in possession of CRAVED[5] items or cash (Clarke, 1999), respectively. That said, the bar itself may be the location of many assaults, the drug dealing location a crime hot spot, and the retail store may be a prolific place for shoplifting. However, the people committing the offenses at these (internal) locations may not be the ones committing the external robberies. Moreover, implementing interventions to target these problems would likely simultaneously reduce assaults (within the bar) which reduces suitable targets (intoxicated bar patrons) for the external byproduct robberies. Displacement of the internal crimes (i.e., assault, drug dealing, and shoplifting) would also not likely be exported to the immediate surroundings because the opportunities and environmental conditions necessary to facilitate them are not present.

In the example of high crime bars exporting crime in the form of robbery on the street, we would expect a diffusion of crime control benefits, not crime displacement. Why might this occur? Assaults could be prevalent at the bar if place management practices are weak (Homel et al., 1992). However, if a prevention strategy included training employees to stop serving alcohol to patrons who are intoxicated, this could alleviate the volume of assaults (Madensen & Eck, 2008). Crime displacement would be a less likely outcome. If this were the only bar in the area, patrons would not have another place to go to continue their drinking and increase their chance of getting into violence. That said, the 80/20 rule[6] states that only a small percentage of places cause most problems (Clarke & Eck, 2005; Eck et al., 2007). Other bars may be in the area, but it is likely that they will have good place management practices that do not encourage this

[5] CRAVED is an acronym that stands for: concealable, removable, available, valuable, enjoyable, and disposable.
[6] In other words, this is often referred to as the "Pareto Principle". For example, see Caspi et al., 2017.

behavior. Instead, a diffusion of crime control benefits would likely result. Not only would the number of assaults decline, but the number and level of intoxicated persons moving to and from this bar would decline leaving fewer suitable targets for robbers nearby.

When considering the relevant theoretical and empirical literature, the hypothetical examples seem plausible. That said, the empirical support for this specific phenomenon is still relatively new. As previously mentioned, many studies relevant to this topic have been more descriptive in nature. They have identified the fact that crime is not randomly distributed in time or space (Sherman et al., 1989), and that problem places often cluster together (Groff et al., 2010). At this point it seems probable that high crime (proprietary) places export crime to nearby locations. That said, further research into this question is certainly warranted. Scholars have already noted the utility of knowing where high crime places are (for more efficient police and crime prevention deployment) and that targeting people or places that are repeatedly victimized can reduce crime substantially. It seems that targeting these problematic places may also reap bonus effects at nearby locations. However, this exporting phenomenon is still heavily understudied.

Despite these advances and the rising importance of micro-spatial places, Jacobs' (1961) work is rarely interpreted using an owner/manager-focused lens (for exception see Reynald & Elffers, 2009). Environmental criminologists cite her work, but often do so briefly. Specifically, her work is either thought of through a resident-focused lens (Smith & Clarke, 2012), or it is mentioned so briefly that the interpretations are ambiguous (Bowers & Johnson, 2017; Felson & Eckert, 2016; 2018). The following chapter provides my re-interpretation of Jacobs' (1961) work using an owner/manager-focused lens. Although residents were discussed in her book, I argue

that the primary actors who incite control on the streets were place managers. I then explain the theoretical applicability of this re-interpretation for variation in crime across neighborhoods.

CHAPTER III.
REFRAMING LENSES: A RE-INTERPRETATION OF JACOBS

> "*...storekeepers and other small businessmen are typically strong proponents of peace and order themselves; they hate broken windows and holdups; they hate having customers made nervous about safety. They are great street watchers and sidewalk guardians if present in sufficient numbers*" (Jacobs, 1961, p. 37).

Jane Jacobs was an architectural journalist whose books, magazine articles, and political activism has made her one of the most influential figures in academia and city planning (Flint, 2009; Harris, 2011; Kanigel, 2016). Though not a trained academic, Jacobs' ideas have permeated through numerous social science fields. Entire edited books continue to be written in her honor (see Hart & Zahm, 2012; Page & Mennel, 2011; Schubert, 2014). In fact, in one of those works, Page (2011) explains that their

> …book emerged out of a belief that there are contradictions in Jane Jacobs's thought and influence that deserve further discussion. This might seem like an odd statement. Over the years, as Richard Harris describes her through a close look at citation indexes, Jane Jacobs has been written about thousands of times. And since her death, there have been exhibits, biographies, panels, and even annual "Jane's Walks" in cities around the world. Is there any American architect, planner, or preservationist over the age of 30 who had not read her or could not at least reel the outline of The Death and Life of Great American Cities? Is there any other writer on cities in the United States whose works are still so widely read?
>
> Because the answer to these questions is "no," we suggest two more questions: Is there any other urbanist whose ideas more people profess to understand who is less understood? And is there another urbanist whose influence is so widely felt even where her name is not well known? We suggest in this volume that the answer is again "no": Many who profess to understand Jacobs's ideas don't, and many more who profess not to know of her work have in fact been deeply influenced by it. Like Freud's, her ideas are everywhere, named or unnamed (Page, 2011, pp. 3-4).

To present, references to Jane Jacobs' ideas are relatively infrequent in the criminological literature. But when they are, I argue that they too are largely misunderstood. Moreover, some studies on crime have used the term "eyes on the street", but do not cite Jacobs (see McMillen, Sarmiento-Barbieri, & Singh, 2019). This provides further support for Page's claim that many do not realize how widespread her ideas have become. Despite being considered a pre-cursor to Newman's (1973) frequently cited work on defensible space, many seemingly relevant pieces

make no reference to her work (e.g., Bursik & Grasmick, 1993; Kornhauser, 1978; Taylor, 2015). In other cases, "even when Jacobs's work is acknowledged, many writers pay scant attention to the significance of it, briefly mentioning it in passing, which in many cases occupies a sentence or two at best, a footnote at worst" (Ranasinghe, 2011, p. 65; for examples, see Jeffery & Zahm, 1993; Lab, 2016; Perkins et al., 1992; Sampson, 2012; Skogan, 1990; Weisburd et al., 2012). Moreover, Jacobs' (1961) ideas are often interpreted using a resident-focused lens and linked to concepts of informal resident control.

In this chapter, I argue that Jacobs' (1961) work has been largely misinterpreted in the criminological literature. I also argue that Jacobs (1961) did not inspire Newman's (1973) work. While both believed that the physical design of places could influence crime, I show that they did not believe in the same crime prevention mechanisms. Given the examples used throughout Jacobs' (1961) book, I believe that interpretations using an owner/manager-focused lens more accurately portray her ideas regarding crime. As such, this chapter contains three sections. The first reviews Jacobs' (1961) overall ideas of cities. Second, I explain how Jacobs' (1961) ideas diverge from those of Newman (1973). Lastly, I provide my interpretation of Jacobs' (1961) work using an owner/manager-focused lens. I argue that this re-interpretation provides a new explanation for neighborhood crime.

Challenging the Status Quo: Jacobs' (1961) Attack on Urban Planning

In the 1940s and 1950s, Jane Jacobs held positions as a feature writer for *Amerika* and *Architectural Forum* magazines respectively. She spent much of her time covering issues regarding urban development and criticized many of the commonly practiced planning strategies. Her work was polarizing. While some were "aghast" that "a crazy dame" (Kanigel, 2016, p. 157) and "a 'housewife' lacking expertise" was given the platform to voice such criticisms, it also led to invitations to high-profile speaking engagements at Harvard University and the like (Graham,

2016, p. 160). This attention garnered her funding to publish her groundbreaking book, *The Death and Life of Great American Cities*, in 1961. Within it, she finally had the platform to express her discontent with urban growth practices that were occurring in major US cities.

In her opening line, Jacobs bluntly proclaims that her book is "an attack on current city planning and rebuilding" (Jacobs, 1961, p. 3). She begins her arguments by stating that the planning policies of the time were based on "a wistful myth" that cities can be repaired provided they have enough money to do so (Jacobs, 1961, p. 4). Yet ironically, she points out that billions had been spent up to that point resulting in failing cities characterized by dull and dreary image, high delinquency and vandalism, chain-stores, cultural centers with little culture, useless promenades, and "expressways that eviscerate great cities" (Jacobs, 1961, p. 4). Planners had since become enamored with the segregation of living spaces, the importance of automobiles, the installation of major shopping malls, and the use of open greenspace to create seemingly beautiful areas that are assumed to be safe.

The orthodox views on city planning were based largely on two models—*the Garden City* and *the Radiant City*—devised by Ebenezer Howard and Le Corbusier, respectively. The former proposed the use of self-sufficient small towns. Specifically, Howard set out to move people from London, England, to much smaller areas that gave people little reason to leave them. At their core would be commercial establishments, but these would be encircled by residential areas followed by agriculture and greenspace. Moreover, these towns were to be controlled by public authorities who would halt any attempts of expansion. Howard wanted to avoid these towns from turning into the very cities he was trying to move people out of. The essential feature of his theory was "relative self-containment" (Jacobs, 1961, p. 18). American proponents of

Howard's ideas—aptly called "Decentrists"—adopted this mentality with hopes to decentralize cities and disperse people to smaller towns.

Jacobs (1961) described the basic mentality of Decentrists as follows:

> The street is bad as an environment for humans; houses should be turned away from it and faced inward toward sheltered greens. Frequent streets are wasteful, of advantage only to real estate speculators who measure value by the front foot. The basic unit of city design is not the street, but the block and more particularly the super-block. Commerce should be segregated from residences and greens. A neighborhood's demand for good should be calculated "scientifically," and this much and no more commercial space allocated. The presence of many other people is, at best, a necessary evil, and good city planning must aim for at least an illusion of isolation and suburbany privacy (Jacobs, 1961, p. 20).

Conversely, Le Corbusier's Radiant City was driven largely by the use of automobiles in cities and the emergence of skyscrapers. His so-called vertical city sought to build upward to create openness on ground level. This purposefully created room to build wide arterial roads to accommodate automobiles and an abundance of greenspace. In essence, he wanted to facilitate the movement of automobiles and take pedestrians off the streets by putting them in parks. Although this approach is less focused on creating self-sufficient living spaces, it does create segregation by dividing space using major roadways. Moreover, the use of open space and grassed areas is encouraged to create sanctuary-like spaces for people.

Both design theories sought to minimize use of the streets and divert people to delegated areas. Moreover, they encouraged people to spend their time within small geographic areas. Creating self-sufficient towns eliminated most reasons for people to spend time elsewhere. Moreover, businesses were often given the least attention in these approaches. Most often, they were included in design plans simply because they provided people basic goods and services. Jacobs (1961) did not embrace any of these views. To her, city streets—when designed properly—could attract an abundance of people which created safe, vibrant places to spend time. These streets required a diverse mix of land use, particularly using businesses. As discussed below, they provide more than just their basic goods and services. Their owners and managers

also serve as key players within the community to watch over the street, create social connections among patrons, and socialize children. She also saw the presence of strangers as integral to city life and objected to the orthodox view of open spaces and city parks. Traditional planners continually proposed the use of open space as a solution to dreary cityscapes, crime, and pollution. However, Jacobs (1961) believed that open spaces were not solutions in and of themselves. Specifically, she states that "people do not use city open space just because it is there and because city planners or designers wish they would" (Jacobs, 1961, p. 90). Instead, they needed to be created with accompanying reasons for people to use them throughout the day.

Although her ideas had a profound impact on the urban planning community, Jacobs' (1961) work was minimally referenced in criminological research until the emergence of Newman's (1973) concept of defensible space. Both highlighted the importance of physical design on human behavior and many believed that Newman (1973) was inspired by Jacobs' (1961) work. The following section describes the links made between the two authors and argues that they differed greatly in how environments should be designed. I then present a revised interpretation of Jacobs' (1961) work and how it applies to crime prevention.

Guilty by Association: Disputing the Link between Jacobs (1961) and Newman (1973)

Numerous works claim that Jacobs (1961) was the inspiration for Newman's (1973) ideas regarding defensible space (Browning et al., 2017; Clarke, 1995; Cozens, 2008; Cozens & Hillier, 2012; Mawby, 2017; Merry, 1981; Taylor & Gottfredson, 1986; Wilcox et al., 2018). However, it is unclear why so many believe that defensible space was an elaboration of Jacobs' (1961) work. In fact, Newman (1973) cites Jacobs only twice and in passing (Mawby, 1977). These two specific references and his overall ideas contradict much of what Jacobs argued for. As I will argue below, even Newman misinterpreted Jacobs (1961) regarding which people were

most important to maintaining safety on the streets. Moreover, I contend that his views on juxtaposition were fundamentally different to Jacobs' (1961). In this section, I propose that Newman (1973) and Jacobs' (1961) ideas largely differ regarding five fundamental design topics: 1. public housing; 2. juxtaposition; 3. parks; 4. the people who engage in informal social control; and 5. strangers.

From both an economic and safety perspective, Jacobs (1961) was not in favor of public housing. Moreover, her arguments regarding mixed land use clearly conflict with Newman's (1973) suggestion to segregate residential space to avoid juxtaposition. Jacobs' (1961) chapter on assimilating children strongly critiques public housing projects and parks. She refers to many examples of street gangs and argues that their most violent behavior occurs at these places. In New York she cites rises in delinquency rates whenever a new public housing complex is built. Similarly, she references one of the worst female gangs in Philadelphia were raised in one of the oldest public housing communities (p. 76). Although Newman (1973) focused on how the physical design of these complexes could influence intervention by residents, Jacobs (1961) clearly doubted this assumption and hinted more at the importance of place managers. When describing problems with high-rise public housing projects, she argued that:

> Not only are these interior parts of the buildings streets in the sense that they serve the comings and goings of residents, most of whom may not know each other or recognize, necessarily, who is a resident and who is not. They are streets also in the sense of being accessible to the public. They have been designed in an imitation of upper-class standards for apartment living without upper-class cash for doormen and elevator men. Anyone at all can go into these buildings, unquestioned, and use the travelling street of the elevator and the sidewalks that are the corridors. These interior streets, although completely accessible to public use, are closed to public view and they thus lack the checks and inhibitions exerted by eye-policed city streets (Jacobs, 1961, p. 43).

Two points from this passage should be noted. First, she did not believe that residents were knowledgeable about who lived in their complexes. They often housed hundreds of people who were too difficult to keep track of. Second, she highlights the lack of place managers, such as door or elevator men, who could act as capable guardians for these properties.

For both children and adults, Jacobs (1961) believes that parks are unsafe because they are often designed in ways that receive little supervision. Yet traditional planners continue to create such spaces within cities to "take children off the streets" to keep them safe (Jacobs, 1961, p. 77). Their solution is often "to build interior enclaves for them in the centers of super-blocks" just as Newman suggested (Jacobs, 1961, p. 79). In fact, to make parks safer, Newman (1973) specifically suggested building surrounding residential buildings whose main entrances face the greenspace to increase surveillance. However, Jacobs (1961) was opposed to this strategy for numerous reasons. First, it limits the number of eyes that could be surveilling the children. This is important to protect them from harm. Such harm could either be criminal or bullying from others, or general mischief that children get into. It also limits surveillance to only those who live in the complex and some do not want anything to do with the children. Second, these areas become boring to children above the age of six. Their imaginations and sense of intrigue compel them to explore beyond the boundaries of these places because "sidewalks are more interesting" (p. 85). Third, it provides little real-world socialization for the children. She argues that the influence of interactions with various adults in a city is important to child rearing. For example, Jacobs (1961, p. 82) recounts an instance where the local locksmith reprimanded her son for running out onto the street. He also informed her husband of their son's dangerous behavior. Jacobs (1961) believes this taught her son not only a lesson in safety but also that he is being watched.

To be clear, Jacobs (1961) was not against the presence of parks. She simply disagreed with how and why planners incorporate them into cities. The traditional view is that parks provide open space and beauty as well as cleaner air. They are often designed to provide natural sanctuaries of greenspace amongst a large urban landscape. Jacobs (1961) believed this mentality

created many unsafe places due to low surveillance. In fact, she argues that "the worst problem parks are located precisely where people do not pass by and likely never will" (p. 107).

Jacobs (1961) observed that the best parks were adjacent to an array of businesses and residences. Using Rittenhouse Square and Washington Square in Philadelphia as illustrations, diversity in nearby land use was key to vibrant, safe parks. The former was surrounded by an abundance of shops and services, residences, and office space that produced "a mixture of users who enter and leave the park at different times" (p. 96). Conversely, Washington Park was only surrounded by office buildings. Thus, the park only saw use by prosocial people during the morning and evening commute times and possibly during the lunch hour. All other times saw little use because workers were "incarcerated all morning until lunch, and incarcerated again after lunch" by their jobs (p. 97).

She also emphasized the importance of creating demand goods at parks. To Jacobs (1961) a park should not be a place for "magnificent views and handsome landscaping" (p. 108) as this does not create legitimate reasons for the use of space. Instead, parks with swimming pools or baseball parks, or those that hold concerts and plays are far safer because they draw sufficient number of people to them. This increased use fosters a safer environment. These ideas conflict with much of what Newman (1973) argued for. His ideas were far more invested in delineating private from public space. He also argued against these juxtaposition principles that Jacobs (1961) clearly argued for.

Jacobs' (1961) ideas regarding mixed land use were also intended for surveillance by different people than Newman (1973) focused on. That is, the actors who exerted informal social control in areas were different for both authors. While Newman (1973) focused on control by residents, Jacobs (1961) considered the watchfulness largely of shopkeepers, although residents

and passersby are sometimes mentioned. Moreover, Newman (1973) assumed that non-residents (i.e., strangers) were the people to be concerned about regarding crime. His design principles were premised on the idea of getting residents to know what space was theirs and to question outsiders who entered the space. In other words, Newman (1973) saw strangers as a threat to safety (Hillier, 2004). This premise assumes that strangers are the likely source of crime in these communities. However, later research on defensible space revealed that local residents are often the ones who commit crimes (Mawby, 2017). Newman's (1973) theory also assumed that residents know each other and can recognize who is an outsider. Both Jacobs (1961) and others have argued that this assumption may be misguided. Residents, particularly in large complexes, are unlikely to know one another (Merry, 1981).

Conversely, Jacobs (1961) did not see strangers as a source of unsafety (Hillier, 2004). That said, she did not explicitly consider them a source of control either. To her, anonymity is a central feature of cities that people come to expect. Moreover, designing streets with a diverse mixture of places, encourages people to occupy the streets. The more people who use the streets, strangers or not, increases the number of people who watch over it. This can be carried out by residents or strangers, but more often occurs by place managers. This idea will be discussed in further detail in the next section.

The works of Jacobs (1961) and Newman (1973) certainly raise the idea that the design of physical space can influence offending. However, why some scholars go as far to claim that Newman (1973) operationalized Jacobs' (1961) ideas (e.g., Cozens & Hillier, 2012) is unclear. Both authors addressed important elements such as territoriality, surveillance, the design of parks and public housing complexes, and strangers. But the opinions regarding how these concepts should function conflict. Thus, pairing these authors was misguided. Moreover, the critiques of

Newman's (1973) work have caused many to disregard the effectiveness of defensible space (Mawby, 2017; Mayhew, 1979; Merry, 1981). Jacobs' (1961) seems to have been equally dismissed despite arguing different ideas that have very divergent policy implications. The next section provides a detailed re-interpretation of Jacobs' (1961) ideas using an owner/manager-focused lens.

Getting New Lenses: Re-Interpreting Jacobs (1961)

From both a planning and criminological perspective, Jacobs (1961) provided ideas about urban design that were ahead of her time. Criminological interpretations of her work focus largely on her general statements about surveillance and safety. Given the resident-focused lens that was available at the time of her book, many believed she saw residents as the primary source of control within neighborhoods. However, using only these general statements has led to misinterpretation of her ideas. Jacobs (1961) used an abundance of examples in her book to contextualize these statements, yet they are rarely referenced in criminological works. These examples also indicate that she saw neighborhoods very differently than those who endorsed the ecological tradition.

Since the emergence of environmental criminology, a very different perspective on criminal events and their prevention is available. Using this new lens provides a very different interpretation of Jacobs' (1961) work, particularly when her examples are considered. As such, this section re-visits some of the most commonly cited passages of her work, but uses this new lens and her examples to show an alternative representation of her ideas. This section presents the core elements of what I call a "Neo-Jacobian" perspective: 1. A deliberate bottom-up, as opposed to ecological, explanation of neighborhoods; 2. the diversity of land use; 3. place managers as the source of informal control; 4. the importance of Jacobs' examples; and 5. the importance of strangers.

As discussed above, research from the Chicago school was rooted in the ecological perspective. It argues that human behavior is dependent on the interaction between organisms and their environment (Byrne & Sampson, 1986; Stark, 1987). Borrowing from Park and Burgess' (1925) ideas of natural urban growth, social disorganization theory argued that cities consistently produce "very similar physical, social and cultural characteristics, leading to their designation as "natural areas" (Shaw & McKay, 1942, p. 18). As such, the ecological approach saw neighborhoods as a fundamental unit of analysis to study crime (Weisburd et al., 2018; Wilcox & Tillyer, 2018).

Despite being frequently cited in research in community criminology, there is little evidence that Jacobs (1961) shared these views about neighborhoods. In fact, she explicitly states that "neighborhood is a word that has come to sound like a Valentine. As a sentimental concept, 'neighborhood' is harmful to city planning" (Jacobs, 1961, p. 112). Moreover, she believed that "we must first of all drop any ideal of neighborhoods as self-contained or introverted units" (Jacobs, 1961, p. 114). Instead, she believed that there were only three types of functional neighborhoods: 1. the city as a whole; 2. street neighborhoods; and 3. political districts of about 100,000 people or more (see Jacobs, 1961, p. 117). None of these classifications fits with the traditional, ecological neighborhood and from a crime and safety perspective, she spoke most often of street neighborhoods.

In Part I of her book, Jacobs (1961) speaks largely of the self-government of city streets. And to her, the streets are the essential units that formed neighborhoods and cities as a whole. Moreover, the emergence of these neighborhoods is deliberate, not natural. This practice can be observed by two key entities: institutions and individual investors. First, Jacobs (1961) acknowledged how banks have engaged in mortgage discrimination (pp. 10-1), thus dictating

who can own property and where. She also referenced the role of government policy that purposefully creates the structure of cities. She argues that:

> There is nothing economically or socially inevitable about either the decay of old cities or the fresh-minted decadence of the new unurban urbanization. On the contrary, no other aspect of our economy and society has been more purposefully manipulated for a full quarter century to achieve precisely what we are getting. Extraordinary governmental financial incentives have been required to achieve this degree of monotony, sterility and vulgarity (Jacobs, 1961, p. 7).

The other entity that plays a crucial role in urban development are individual investors. They make the specific decision to purchase property at a specific location and open their businesses there. Similarly, people choose to deliberately spend their time at places that have some kind of appeal or draw. Thus, these environments do not naturally emerge in an ecological sense, they arise from specific decisions made by owners and users of space. In fact, Jacobs (1961) points out that:

> A sidewalk life, so far as I can observe, arises out of no mysterious qualities or talents for it in this or that type of population. It arises only when the concrete, tangible facilities it requires are present. These happen to be the same facilities, in the same abundance and ubiquity, that are required for cultivating sidewalk safety (Jacobs, 1961, p. 70).

Consequently, the formation of vibrant, safe, and prosperous neighborhoods is entirely within the control of property owners. It simply requires strategic use and management of space.

For instance, Jacobs (1961, pp. 243-5) uses a local property owner Charles Abrams to explain how investors make calculated investment decisions to increase their economic gain. Close to her residence on Eighth street in Greenwich Village, Jacobs (1961) recounts how most investors were focused on opening restaurants. These were considered low risk investments that were yielding substantial profits. Although this strategy was working at present, Abrams was beginning to see more diverse types of commerce appearing on other city streets. Consequently, the vibrancy and excitement that accompanied places such as art galleries, bookstores, and clubs were thriving elsewhere. He foresaw a loss in popularity of Eighth street if the restaurant-only

investment mentality continued. As people become disinterested in the area, it would suffer economically and the businesses would likely shut down.

Jacobs (1961) praised Abrams for being the only property owner to formulate a different investment strategy. Specifically, he "deliberately searched out tenants who [would] add something other than restaurants to the mixture" (p. 245). Some of his earlier investments included the opening of a small night club and motion picture theater. His business decision was made deliberately to draw more people to the area on evenings and weekends. Jacobs (1961) later observed that convenience and specialty shops began growing because of the increased traffic.

If street blocks are diversified properly, Jacobs (1961) argues that it creates an "intricacy of sidewalk use, bringing with it a constant succession of eyes" for surveillance and safety (p. 50). She observed this on her own street and specifically refers to this as "intricate sidewalk ballet" (Jacobs, 1961, p. 50). In a vivid example, she explains that use and surveillance of the street is constant for nearly the entire course of a day. Beginning in the morning she observes students walking to school as place managers begin to open their businesses for the day. She observes that:

> While I sweep up the wrappers I watch the other rituals of morning: Mr. Halpert unlocking the laundry's handcart from its mooring to a cellar door, Joe Carnacchia's son-in-law stacking out the empty crates from the delicatessen, the barber bringing out his sidewalk folding chair, Mr. Goldstein arranging the coils of wire which proclaim the hardware store is open… (Jacobs, 1961, p. 51).

She explains that these place managers become the watchers of the street, both for the vitality of their businesses and on behalf of the residents who are gone to work during the day. By the end of the work day, some businesses begin shutting down, while others such as the pizza parlor, bars, and restaurants begin opening. In many cases, these businesses remain open well after midnight and attract even more people to the area.

An investment strategy that favors diversity within small street block units forms the bedrock of Jacobs' (1961) vision of a vibrant city. To her, the best parts of a city were blocks filled not only with residences, but also an array of businesses that draw people to the streets. Thus, a crucial take-away of Jacobs' (1961) view of how neighborhoods emerge, is that property owners are central to the makeup of cities. They dictate whether a city is economically prosperous or destitute and they influence the behavior and safety of those who live there. Just as place management theory describes, crime is an indirect concern to place managers. Their primary concern is the overall functioning of their place (Eck & Madensen, 2018). If crime is not a problem on their property, they have no reason to enact preventative measures. However, if crime poses a threat to their business, most place managers will be strongly motivated to resolve the problem.

Five years before the release of her book *Death and Life*, Jacobs was emphasizing the importance of stores, and specifically storekeepers, in creating functional urban environments. Following a lecture she gave at Harvard University, Jacobs published an article in *Architectural Forum* in 1956 detailing the importance of stores and their proprietors. She thought of them in an entirely different way from traditional city planners. To her, they served functions far beyond the goods or services they formally supply. In her 1956 article she argued that:

> Planners and architects are apt to think, in an orderly way, of stores as a straightforward matter of supplies and services. Commercial space.
>
> But stores in city neighborhoods are much more complicated creatures which have evolved a much more complicated function. Although they are mere holes in the wall, they help make an urban neighborhood a community instead of a mere dormitory.
>
> A store is also a storekeeper. One supermarket can replace 30 neighborhood delicatessens, fruit stands, groceries and butchers, as a Housing Authority planner explains. But it cannot replace 30 storekeepers or even one. The manager of a housing project in East Harlem says he spends three-fourths of his time on extraneous matters; he says: "I'm forced into trying to take the place of 40 storekeepers." He is no better trained to handle this than a storekeeper and not as good at it because he does it grudgingly instead of out of pleasure of being a neighborhood hub and busybody. Also it happens that most of the tenants heartily dislike him, but he is the best they have in the way of a public character in that super-block and they try to make him do (Jacobs, 1956, p. 132).

This passage indicates the importance of place managers, particularly those who run non-residential businesses. Her focus on stores is particularly important because it was the Harvard speech and its subsequent publication that made Jacobs stand out to intellectuals interested in cities and put her on the path to write *Death and Life* (Kanigel, 2016). Clearly, to Jacobs, stores and those who operated them were vital to understanding street life, yet few criminologists have ever acknowledged the importance of place managers when referencing her work. I believe this occurred for two reasons. First, scholars interpreted her work using the resident-focused lens. This focused primarily on the informal control of residents against crime and delinquency at a macro-level scale. Second, scholars focused primarily on Jacobs' (1961) general statements about informal control of the streets. Most criminological works cite Jacobs' (1961) overall statements about increasing surveillance or control. However, few directly reference the abundance of examples she uses to clarify her statements. In fact, most critics of her ideas dismiss her ideas because they are based on anecdotal examples (Cozens, 2008; Cozens & Hillier, 2012; Graham, 2016; Harris, 2011; Mawby, 1977; Wekerle, 2000). While one can argue that her examples are anecdotal, they should not be viewed as weakness in her theory. In fact, the examples are crucial to understanding her ideas. They describe the specific people and processes that she thinks are required for a safe and vibrant city.

For instance, when considering improvements in safety, Jacobs (1961) uses numerous examples of how shop keepers incite informal control on streets. In fact, Part I of her book focuses largely on city design and speaks often of safety. In the 111 pages of this section, she provides 110 distinct examples to illustrate her ideas. Of these examples, thirteen of them recount stories of specific people exerting control in the street. Of these thirteen examples, three recount the actions exclusively of residents, whereas ten of them describe the behaviors of place

managers. Moreover, one of the three resident-focused examples describes an instance in Manhattan where a neighborhood (that Jacobs (1961) noted "had no neighborhood stores and no regular public characters" (p. 123)) developed a drug problem and despite action by residents, no improvements were made. In fact, she recounts that the problem only worsened (see Jacobs, 1961, pp. 123-4). An additional fourteen examples mention the presence of stores in neighborhoods that she considers safer or a lack of stores in areas that she sees as more dangerous. I believe her lack of resident-focused examples indicates that she did not consider them the primary sources of safety and control.

Returning to Jacobs' (1961) passage regarding the three main qualities to create safe neighborhood streets (see page 16 in chapter 2), criminological works most often refer to the first and third qualities. As discussed, they relate largely to Newman's (1973) ideas of territoriality and surveillance. However, the second quality is rarely cited. As seen in the quote, it implies very different types of people to watch over the street, namely "the natural proprietors of the street" (Jacobs, 1961, p. 35). From her subsequent examples, these people appear to be place managers. Readers should also note the difference in language between the second and third qualities. The former refers to eyes *upon* the street, whereas the latter refers to eyes *on* the street. I argue that eyes upon the street refers to those within the adjacent buildings who take a vested interest in what goes on outside, namely place managers. They are the ones who are looking. Whereas the eyes on the street are merely the eyes of pedestrians, whether they are looking or not. The *upon* eyes are active whereas the *on* eyes are mostly passive. Considered in light of Danielle Reynald and Henk Elffers' (2009) work, this distinction is important, not merely semantics.

Shopkeepers make up the majority of Jacobs' (1961) examples when discussing safety, the disciplining of children, and the foundation of neighborhoods. Moreover, a fundamental reason why shopkeepers are motivated to be involved in such matters is because it directly influences the success of their business. In this regard, it is worth repeating the quote I used at the beginning of this chapter:

> …storekeepers and other small businessmen are typically strong proponents of peace and order themselves; they hate broken windows and holdups; they hate having customers made nervous about safety. They are great street watchers and sidewalk guardians if present in sufficient numbers (Jacobs, 1961, p. 37).

To Jacobs (1961), maintaining a safe environment at and around their shops is economically driven. Their businesses are their livelihood and creating safe environments encourages customers to patronize their establishments frequently. This allows them to stay in business.

Jacobs (1961) frequently illustrates the action of place managers throughout her book. For instance, she recounts the many tasks taken on by Bernie Jaffe, a candy store owner, above and beyond his business's services. In addition to running his store, he

> supervised the small children crossing at the corner on the way to P.S. 41, as Bernie always does because he sees the need; lent an umbrella to one customer and a dollar to another; took custody of two keys; took in some packages for people in the next building who were away; lectured two youngsters who asked for cigarettes; gave street directions; took custody of a watch to give the repair man across the street when he opened later; gave out information on the range of rents in the neighborhood to an apartment seeker; listened to a tale of domestic difficulty and offered reassurance; told some rowdies they could not come in unless they behaved and then defined (and got) good behavior; provided an incidental forum for half a dozen conversations among customers who dropped in for oddments; set aside certain newly arrived papers and magazines for regular customers who would depend on getting them; advised a mother who came for a birthday present not to get the ship-model kit because another child going to the same birthday party was giving that; and got a back copy (this was for me) of the previous day's newspaper out of the deliverer's surplus returns when he came by (Jacobs, 1961, p. 61).

Jacobs (1961) observed shopkeepers as taking on community roles far more involved that simply running their businesses—in Bernie Jaffe's case, just selling candy. As such, locals considered storekeepers to have a superior status within the neighborhood. In fact, many "enjoy an excellent social status, that of businessmen" (Jacobs, 1961, p. 61). Consequently, these shopkeepers are the ones who create the dynamics of city streets. They can link people together and provide

guardianship over the street. Jacobs (1961) refers to these individuals as public characters. More specifically, she argues that:

> the social structure of sidewalk life hangs partly on what can be called self-appointed public characters. A public character is anyone who is in frequent contact with a wide circle of people and who is sufficiently interested to make himself a public character…Most public sidewalk characters are steadily stationed in public places. They are storekeepers or barkeepers or the like. These are the basic public characters. All other public characters of the city sidewalks depend on them—if only indirectly because of the presence of sidewalk routes to such enterprises and their proprietors" (p. 68).

The social role of place managers is integral to Jacobs' (1961) arguments regarding safe city streets. As storekeepers get to know people, it creates a sense of community whereby they can connect people. She also argues that they seem to take a sense of ownership of the streets to protect those who use the space. It also encourages people to travel through the streets to enjoy "the uniqueness and friendliness of stores, [and] the pleasures of running into people when doing errands at the next corner" (Jacobs, 1961, p. 71).

However, there is a fine line between the ratio of shopkeepers to the demand created by users of the street. More specifically, she states that:

> Efficiency of public sidewalk characters declines drastically if too much burden is put upon them. A store, for example, can reach a turnover in its contacts, or potential contacts, which is so large and so superficial that it is socially useless. An example of this can be seen at the candy and newspaper store owned by the housing cooperative of Corlears Hook on New York's Lower East Side. This planned project store replaces perhaps forty superficially similar stores which were wiped out (without compensation to their proprietors) on that project site and the adjoining sites. The place is a mill. Its clerks are so busy making change and screaming ineffectual imprecations at rowdies that they never hear anything except "I want that." This, or utter disinterest, is the usual atmosphere where shopping center planning or repressive zoning artificially contrives commercial monopolies for city neighborhoods. A store like this would fail economically if it had competition. Meantime, although monopoly insures the financial success planned for it, it fails the city socially" (Jacobs, 1961, p. 71).

Clearly, Jacobs (1961) sees storekeepers as a source of both social cohesion and safety within neighborhoods. However, there needs to be a sufficient number of them present within neighborhoods to optimize their role.

Lastly, Jacobs (1961) highlights the interplay between shopkeepers and strangers. As previously mentioned, she was one of the few who did not see strangers as a source of danger in

cities. In fact, she believed they are integral to city life. Strangers can serve two crucial purposes. First, they provide an additional source of eyes on the street. Jacobs (1961) reminds readers that although some strangers may pose a threat to safety, most are well-intentioned, good people. In fact, during her accounts of a street's sidewalk ballet she points out that storekeepers become the watchers of the street during the day as residents leave for work and become strangers on other blocks (p. 51). These are everyday people who do not pose a threat to adjacent blocks simply because they do not reside on them. She also argues against the orthodox planning view of creating quiet, open, and empty space within cities (see Jacobs, 1961, p. 37). Instead, she believes that streets should possess various stores and public places to create environments where people want to spend time. She uses her own street to illustrate this saying that the mixture of establishments draws people during all times of the day. The bars in particular assure that a substantial number of people will be on or watching the streets until 3 in the morning (p. 40-1). In another example, she explains that a stranger helped a local when he injured himself while intervening between scuffling friends. She believed that when a street can foster strong social relationships between users, strangers will also pick up on the atmosphere and act accordingly.

The second reasons strangers are important is because they motivate place managers to maintain safe areas. As previously mentioned, the primary concern of place managers is to assure the smooth functioning of their place (Eck & Madensen, 2018). At its core, place managers are economically driven. They have opened a business to generate revenue and make a living. Strangers are paramount to them. As per the fourth element place management theory, storekeepers must continually acquire resources to keep their businesses afloat. Attracting customers is the main way to do this. However, shopkeepers want customers to return and a primary factor that determines whether this will occur, is whether customers feel safe shopping

there. As a result, this provides concrete motivation for place managers to take action in order to assure safety at and around their business.

Conclusions

Re-interpreting Jacobs' (1961) work using an owner/manager-focused lens provides a very different account of crime and how it arises in neighborhoods. Arguably, one of the most fundamental elements that has been overlooked in her work is her focus on stores and their managers. Her examples exemplify her views that neighborhoods emerge through deliberate action, and not a natural, ecological process. Interestingly, other scholars have made similar arguments. For instance, within criminology Snodgrass (1976) wrote that:

> A most striking aspect of Shaw and McKay's interpretation, then, is the absence of attempts to link business and industrial invasion with the causes of delinquency. The interpretation stayed at the communal level and turned inward to find the causes of delinquency in internal conditions and process within the socially disorganized area.
>
> Thus, their interpretation stopped abruptly at the point at which the relationship between industrial expansion and high delinquency areas could have gone beyond the depiction of the two as coincidentally adjacent to one another geographically. The interpretation was paralyzed at the communal level, a level which implied that either the residents were responsible for the deteriorated areas, or that communities collapsed on their own account. Instead of turning inward to find the causes of delinquency exclusively in local traditions, their interpretation might have turned outward to show political, economic, and historical forces at work, which would have accounted for both social disorganization and the internal conditions, including delinquency. Needless to say, the interpretation as it stood left business and industry essentially immune from analysis, imputation, and responsibility in the causes of delinquency.
>
> The ecological studies usually made no comment about the joint distribution of delinquency and industry, beyond the fact that the two impinged upon one another (Snodgrass, 1976, p. 10).

His piece highlights the lack of emphasis on how businesses have played a role in shaping the structure of communities from an ecological perspective and their resulting crime patterns.

Scholars in other fields, such as geography and planning, have also begun arguing against natural processes as the explanations for neighborhood decline in cases beyond crime. Instead, some have argued that "neighborhood decline is not the only result of changing housing preferences or of structural changes in the economy (which are the usual explanations for neighborhood decline), but also of the actions of real estate actors and other 'socio-spatial

agents'" (Aalbers, 2006, p. 1063). As such Jacobs' (1961) ideas appear as relevant today as they were at the time of her writing. As the next chapter will describe, applying Jacobs' (1961) re-interpreted ideas provides a new approach to studying neighborhood crime that shows great promise.

CHAPTER IV.
USING NEW LENSES: A NEO-JACOBIAN PERSPECTIVE OF CRIME

> "*It is so easy to blame the decay of cities on traffic…or immigrants…or the whimsies of the middle class. They decay of cities goes deeper and is more complicated. It goes right down to what we think we want, and to our ignorance about how cities work. The forms in which money is used for city building—or withheld from use—are powerful instruments of city decline today*" (Jacobs, 1961, p. 317).

The previous chapters discussed the historical evolution of neighborhood crime explanations. Beginning with social disorganization theory, a resident-focused lens to understanding variation in crime rates across neighborhoods was the product of a natural process. However, with the emergence of the owner/manager-focused lens, focus has moved from the neighborhood-level to the place-level. This includes individual addresses and street segments. To present, both spatially-focused lenses are used in criminological research. However, research explaining differences in crime across neighborhoods continues to use the resident-focused lens. Based on my re-interpretation of Jacobs (1961) I argue that there is another way to conceptualize how crime materializes within neighborhoods.

This chapter begins by summarizing the current ways criminologists study neighborhood crime, namely through the use of multilevel modeling that assume a top-down, place in neighborhood (PIN) framework (Wilcox & Tillyer, 2018). I then present a Neo-Jacobian inspired perspective to studying neighborhood crime. Specifically, it is a bottom-up approach which implies that crime at small measurable units—such as addresses or street segments—produce the majority of variation in crime at larger units of analysis such as neighborhoods. This framework forms the basis for much of the empirical tests that I will carry out for this dissertation.

Current Empirical Studies of Places and the Unit of Analysis

Despite the findings within recent micro-spatial studies, much research on the geography of crime is still approached using a resident-focused lens. Traditionally the two spatially-based

streams of research focused on explaining crime at different levels. Specifically, the social disorganization approach examined crime at a macro, neighborhood level. Conversely, the environmental criminology theories were concerned with micro-level proprietary or proximal places. In other words, they studied crime exclusively within their respective units of analysis. For example, some argued that "traditional collectivity theories may be appropriate for explaining community-level variation, but they seem inappropriate for small, publicly visible places with highly transient populations" (Sherman et al., 1989, p. 30). However, by the late 1980s some scholars began proposing innovative ways to integrate both perspectives and argue that they can complement one another (Wilcox & Tillyer, 2018).

The first integration of these theories used multi-level modeling. Despite being one of the most famous proponents for community criminology, Sampson along with Wooldredge (1987) published a study linking the micro- and macro-level factors of victimization using the British Crime Survey data. They innovatively argued that motivated offenders could be jointly influenced by the proportion of opportunities in a general neighborhood as well as the individual targets within it. Their findings suggested that individual factors such as age and lifestyle accounted for individual victimization. However, with crimes such as burglary and personal theft, community-level factors played a significant role. For instance, although other individual-level variables were statistically significant, owning a Videocassette Recorder (VCR) at an individual level had no impact on burglary risk, but neighborhoods with higher proportions of households that contained VCRs were more likely to be victimized.

Subsequent multilevel studies have since found evidence that community-level factors can actually condition the likelihood that certain individual-level variables are predictive of crime. For instance, Wilcox Rountree et al. (1994) found that being nonwhite increased one's

likelihood of being victimized in "ethnically homogenous neighborhoods [as opposed to] ethnically heterogeneous communities" (p. 406). In a multi-level study of guardianship effects, Wilcox et al. (2007) found that individual guardianship measures were more effective in some neighborhoods but not others. Thus, the characteristics of some neighborhoods could actually impede the effectiveness of individual guardianship altogether.

Using smaller units of analysis (i.e., face blocks), Smith et al.'s (2000) analysis of street robbery revealed that land use interacted with social disorganization variables such as the number of single-parent households. This led them to conclude that social disorganization variables typically predicted robbery potential (i.e., representing the proximate street blocks to each unit in question and their risk of crime), but both social disorganization and routine activity factors predicted actual street robberies. Thus, instead of explaining the concentration of crime as a product of the overlap of offenders' awareness spaces, their findings suggested that they are present because they are located in socially disadvantaged neighborhoods.

This intersection between multiple components of crime pattern theory (Brantingham & Brantingham, 1993) was also found in Deryol et al. (2016). In their micro-spatial analysis of distance to nodes and activity paths in the context of environmental backcloths, they found a similar multilevel interaction. More specifically, as the distance to nodes (such as liquor establishments) and paths (such as bus routes) increased, crime decreased. Furthermore, when a macro-level environmental backcloth variable characterized by social disorganization variables was added to the models, a positive relationship resulted. Thus, as disadvantage increases, so does crime. Once again, a conditioning effect seems to be present in that offending at crime-generating nodes and paths is actually exacerbated by a macro-level environmental backcloth of concentrated disadvantage.

Despite these multilevel findings, a new trend in integration has been proposed whereby social disorganization effects are believed to influence crime within street segments. In their analysis of Seattle data, Weisburd et al. (2012) found that the small percentage of street segments that accounted for the majority of crime were also the same places that were characterized by many of the predictors of social disorganization and routine activity theory. They also discovered that their measures of social disorganization were better able to predict the trajectories that represented the crime waves and crime drops in Seattle thus warranting the inclusion in place-based models. Similar results were also found in a micro-spatial study of social disorganization variables in Israel (Weisburd et al., 2018).

Given these advancements, Wilcox and Tillyer (2018) have since proposed a theoretical place in neighborhood (PIN) approach. They argue that micro-level crime opportunities are located within a broader environmental context that impacts whether offenders choose to commit an offense. More specifically, macro-level factors should always be considered because offenders will invariably choose a neighborhood to offend in first and then their specific target within it. Given much of the aforementioned literature, this proposition can explain why some individual-level variables might not be statistically significant in these integrative models. Instead, there is an interaction between specific targets and the contexts in which they are located.

As such, the most common way to study neighborhood crime is through this multilevel integration approach. It typically follows one of two approaches. The first tests simultaneous micro- and macro-level processes that operate within neighborhoods (e.g., Sampson & Wooldredge, 1987). The second assumes a top-down (macro- to micro-level) framework whereby neighborhood-level functions give rise to high crime places. Put another way, offenders

first select a neighborhood, then a target within it (e.g., Wilcox & Tillyer, 2018). However, one limitation of using a multilevel analytic technique is that the results are only as strong as the measures used in the models. That is, poor measurement of structural variables can produce misleading results. The models also assume that neighborhoods emerge via ecological processes described by Shaw and McKay (1942). Moreover, many of these studies use census tracts as proxies for neighborhoods (Wilcox et al., 2018). Use of them increases the availability of macro-level data, but the validity of how well these units of analysis translate to neighborhoods is not well known.

However, new evidence from environmental criminology and the re-visiting of Jacobs' (1961) work suggests that cities do not naturally evolve. Instead, they are built deliberately from individual places whose influences aggregate up to entire neighborhoods. Consequently, this suggests complimentary bottom-up (micro- to macro-level) framework of crime places. This assumes that crime hotspots are accounted for by poor place management, and remaining offenses are attributed to neighborhood effects. I argue that strong place management is one of the primary factors in Jacobs's (1961) discussion of crime and safety within cities. As such, the following sections will provide my alternative application of her work using an owner/manager-focused lens.

The Neo-Jacobian Perspective: How Poor Place Management Drives Neighborhood Crime

Given this new interpretation of Jacobs' (1961) work, a very different explanation of crime patterns within neighborhoods is apparent. Instead of attributing the control of crime to residents or passers-by, Jacobs (1961) provides many examples of shopkeepers who monitor public and private space. It seems more likely that these individuals would intervene because they have a vested interest in keeping their businesses and surrounding areas safe. Moreover, she argued that cities are built deliberately by both institutions such as governments and banks, as

well as individual investors who open businesses. As such, the built environment emerges through deliberate investment decisions by those who own property.

Table 4.1. A Summary of the Neo-Jacobian Perspective	
Start small and work up	Do not assume larger areas have effects as a starting point
Land use is deliberate	Land use is not the result of a natural process
Land use should be diverse	Do not assume land use should be homogeneous and residential
Place managers are an important source of social control	Most social control is not an emergent property of people sharing spaces
Strangers are important and most are not dangerous	In cities most people are strangers and shared experiences are rare
General principles and correlations are not powerful enough to clarify theories	Examples of actual behavior, drawn from observations, are important for clarifying general principles

Here I propose a Neo-Jacobian[7] perspective to explaining neighborhood crime (summarized in table 4.1). Contrary to the traditional ecological approach, it does not consider neighborhoods the fundamental unit of analysis. This is so for several reasons. First, the community criminology literature has provided no clear definition as to what constitutes a neighborhood (Taylor, Gottfredson, & Brower, 1981). Specifically, there is "conceptual ambiguity that prevails within criminology, where no supreme body exists to settle such definitional issues" (Wilcox et al., 2018, p. 2). Second, Jacobs (1961) did not agree with the traditional characterization of neighborhoods. To her, "…the conception of neighborhood in cities is meaningless—so long as we think of neighborhoods as being self-contained units to any significant degree, modeled upon town neighborhoods" (Jacobs, 1961, p. 117). Instead, she focused on much smaller areas, such as street blocks. However, as this approach argues, crime across larger units will vary according to the amount of crime at individual places. Because this

[7] Note: The term "Neo-Jacobian" dates back to at least 1974 when "none other than the sitting chair of the New York City Planning Commission, Lindsay-appointed lawyer John Zucotti, spoke for many urbanists declaring: 'To a large extent, we are neo-Jacobeans.'" (as cited in Klemek, 2011, p. 210).

approach argues for a bottom-up aggregation approach, the definition of larger units is not imperative. These units could be neighborhoods, census tracts, or uniform grids. Regardless of how the larger units are defined, the approach assumes that variation across them will be largely the product of how many poorly managed places they contain.

Within a city street, there can be dozens of properties, all of which possess an owner. As Jacobs (1961) described, individual investors yield great power over the dynamics within these streets. Their investment decisions regarding which properties to purchase and what to use them for can profoundly influence who uses the area and how. When a diverse cluster of places are present on a street block, it can create a vibrant community that attracts many people to the area. If done strategically, this mixture of places will bring people during many hours of the day and create a safe environment.

From a crime prevention perspective, this implies that focus should start at the place level, specifically proprietary places. Investment decisions are made at each land parcel. Then the deliberate management decisions at these places dictate which places are safe and which are not. Jacobs' (1961) example of Charles Abrams buying up properties on Eighth Street to open a small night club and motion picture theater to diversify their street also highlights the clustering of properties that are owned by the same person. Thus, it is likely that the management decisions to enable the smooth functioning of a place will be relatively similar if owned by the same person. As a result, a street block with properties owned by a single place manager who makes strategic management decisions will lead to a safer street block overall. Having said that, Jacobs (1961) also alludes to a so-called network of place managers in her book. In the above-mentioned example of multiple place managers emerging when an altercation between a little girl and man (who turned out to be her father) occurred, numerous shopkeepers emerged into the

street to see if the girl required help. Thus, places within a street do not all need to be owned by the same person. Provided they are operated by responsible managers who all seek to create a safe environment for their customers, a clustering of good place management will also be observed. In other words, proper management at specific places can see an aggregate effect that spreads across a larger geographic area.

These re-framed ideas present a different approach to looking at neighborhood crime. These management processes imply that differences in area crime rates are largely the product of poorly managed places. That is, areas with more poorly managed places will have more crime than areas with fewer poorly managed places. This implies a bottom-up approach to studying area crime. It entails starting with crime at the smallest measurable units—such as addresses or street segments—and building up toward area functions. It assumes that high crime at chronic hotspots are the systematic product of poor place management. Once crime at these micro-spatial places are accounted for, the remaining variation in crime within a larger unit is believed to be attributed to other factors such as structural area effects. Again, the processes that occur at smaller levels can then be aggregated to larger ones, but the definitions of these larger units are not crucial to the theory. Crime across larger units will vary depending on how many poorly managed places are contained within it. One possible advantage of starting at the micro-level and building up would be for us to determine how much variation is accounted for at the place-level. Then the level of variation leftover due to other factors such as area-level effects can be assessed.

CHAPTER V.
THE CURRENT STUDY AND NEIGHBORHOOD

"*The first step is to realize that unlimited land is not where we think it is, but that a wealth of it lies almost unnoticed where we think it isn't*" (Jacobs, 1957, p. 63).

In the preceding chapters I took a firm stance. The Neo-Jacobian perspective I have proposed provides an alternative way to examine neighborhood crime. However, I want to make several qualifications to these ideas. Some may perceive the framework as a stark contrast to the resident-focused perspective rooted in the ecological approach to thinking about neighborhoods. To some extent, this may be true. This was done deliberately. One the one hand, many scholars have conducted work based in the ecological approach which assumes a natural emergence of macro-level structural effects and their influence on crime. On the other, the Neo-Jacobian perspective uses much of the theory from environmental criminology which can sometimes challenge the other viewpoint. Yet as Snodgrass (1976) argued, it is likely that neighborhood crime is a product of both inward and outward factors. More research attention has simply gone into the former over the past century. As environmental criminology theories have been created, it has provided this alternative lens by which we can understand what causes neighborhood crime. The previous chapters were deliberately written to emphasize the merits of the alternative lens. We must understand the absolutes in order to understand what is really going on, even if in reality, both are at play.

The next three chapters test the Neo-Jacobian perspective. My goal is two-fold. First, I wanted to explore whether Snodgrass' (1976) outward factors do have an influence on neighborhood crime. Like Jacobs (1961), he argued that the historical, economic and political decisions made within neighborhoods impact its crime rates as much as inward structural factors do. These can include government decisions about housing, street configuration, and city planning as well as economic decisions such as who buys property, where, and how they use it.

Second, if these outward factors do have an influence on neighborhood crime, how big is this influence? Do some neighborhoods have more crime simply because they have a lot of poorly managed properties that create hotspots? Or are both resident and owner-manager effects simultaneously present within these neighborhoods? In this chapter I describe the places and neighborhoods I chose to study as well as the three studies I carried out to answer the above questions.

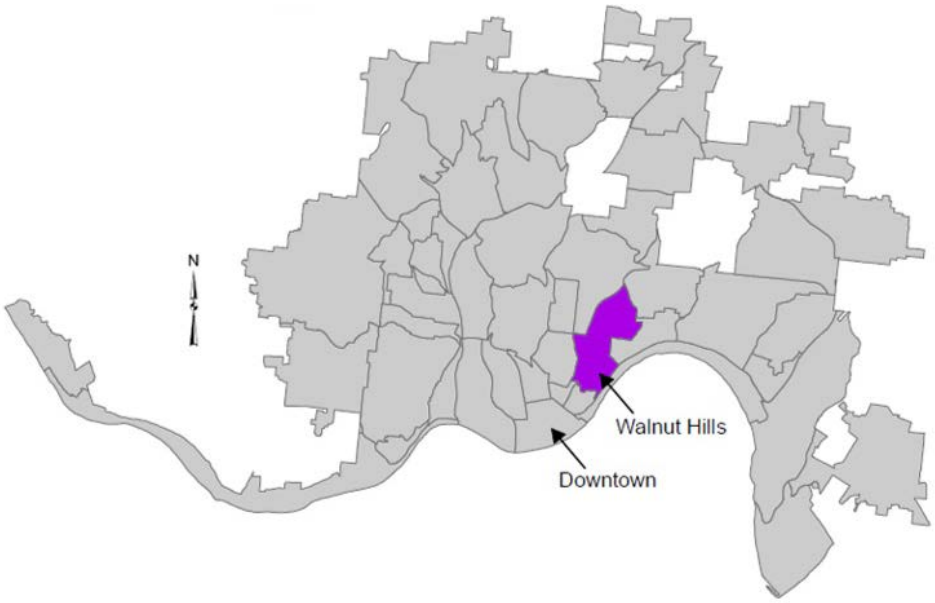
Walnut Hills, Cincinnati, OH: A Brief History

Walnut Hills is at the center of my research. It is one of 52 neighborhoods located in Cincinnati, Ohio. Situated approximately 2 miles northeast of Downtown (see figure 5.1), the neighborhood was annexed to the city in 1870. While originally established by Reverend James Kemper (1753-1834) as farm land in 1794, it became an established business district by the 1840s (Ghosh et al., 2009; Giglierano et al., 1988). Walnut Hills is a hilltop neighborhood thus requiring means of transportation for its residents to travel to and from the downtown basin. In the early 19th century, much of the housing stock consisted of large mansions to serve affluent members in the city who had the means to travel to and from downtown. Some studies suggest that around 9,000 African Americans resided in the neighborhood working on the farms or in the mansions (City Planning Commission, 1969a).

Because travel up hillsides to Walnut Hills posed a challenge for many, a commercial sector began to emerge at what is now the intersection of Gilbert Avenue and McMillan Street. Though originally called Kay's Corner in the 1840s, by the 1880s it became known as Peebles Corner. Around this same time cable cars were introduced into the neighborhood to connect from Downtown up Gilbert Avenue and it quickly became one of the busiest intersections in the city (Ghosh et al., 2009; Giglierano et al., 1988). The name change was the result of grocery store

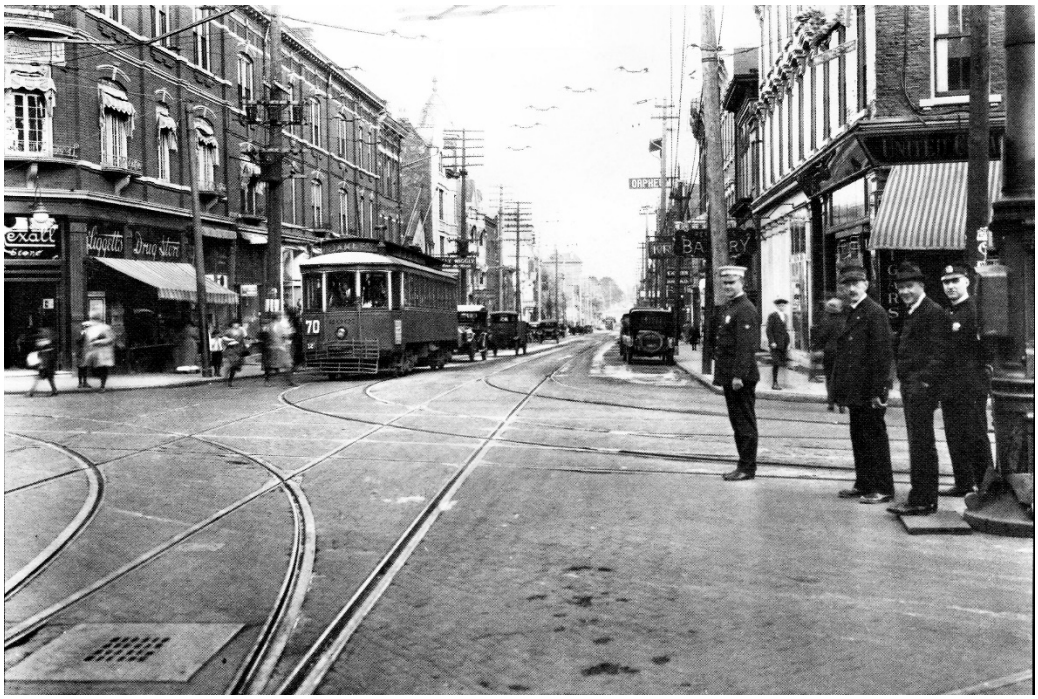
owner Joseph R. Peebles convincing cable car operators to yell out his store's name at that stop (Brownfield, 2017).

Figure 5.1. Location of Walnut Hills Neighborhood within the City of Cincinnati, OH



By 1889 the cable cars were replaced with electric streetcars, a faster and more reliable mode of transportation (Giglierano et al., 1988). This dramatically reduced travel time and cost to downtown resulting in substantial population growth. Consequently, Peebles Corner quickly became a sought after commercial hub in the city (see figure 5.2). Many specialty shops, such as menswear and shoe stores, made Walnut Hills a destination shopping location (Brownfield, 2017; Hall, 1983). Although developers continued to build larger mansions in the neighborhood, others built less expensive housing for middle-income residents near the street car lines attracting many new residents from the downtown basin (Giglierano et al., 1988). Walnut Hills also developed a strong reputation for its prevalence of churches and schools (Ghosh et al., 2009).

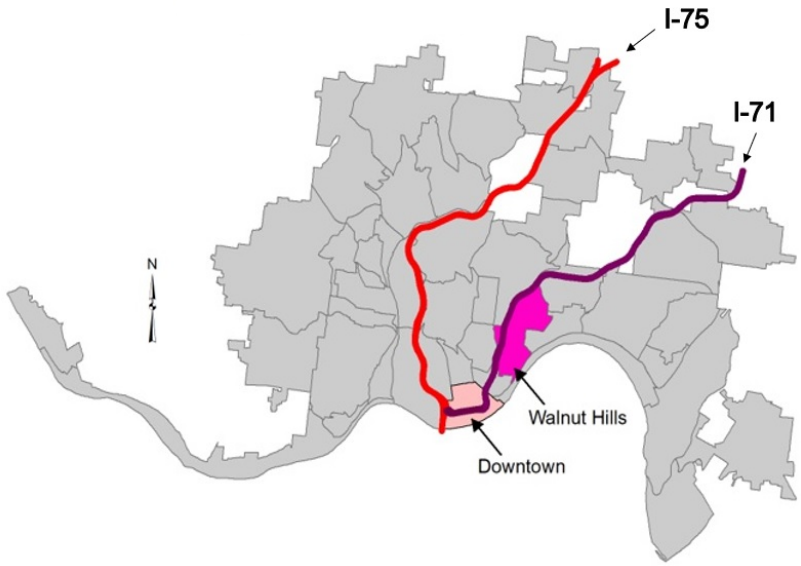
Figure 5.2. Peebles Corner Circa 1926. Photo from: http://cincinnativiews.net/peebles.htm



Businesses in Walnut Hills were affected somewhat by the Great Depression of the 1930s, but many survived the economic downturn. However, some very substantial changes leading to neighborhood decline began after World War II. The construction of the Interstate system created several massive changes in the city at large. Interstate 71, in particular, was built through part of Walnut Hills, thus separating a small piece of it (see figure 5.3). As the use of automobiles and highways became more commonplace, a mass exodus to the suburbs began. This hit Walnut Hills particularly hard. Specifically, "between 1962 and 1974, 311 buildings housing 727 families and 39 businesses were demolished to construct the stretch of I-71 between Wilkinson and Victory Parkway" (Hill, 1983, p. 38). Around this same time, urban renewal and interstate 75 construction projects forced nearly 40,000 residents—97% of whom were African American—from the West End neighborhood (Hurley, 2006). Many of these residents settled in Walnut Hills because it was one of the few options available to them. As Giglierano et al. (1988)

note, “up through the mid-twentieth century, black families usually could move only into neighborhoods where members of their race already lived” (p. 173). Because the some 9,000 African American residents had been residing in the neighborhood since the 1860s, Walnut Hills was one of the only options for many of these families.

Figure 5.3. Placement of Interstate 71 and 75 through Cincinnati.



These changes led to a substantial departure of white residents from the neighborhood to more affluent, suburban ones. Specifically, Walnut Hills went from 71% white in the 1950 census to 52% white in 1960 (Hill, 1983). By 1970, more than 80% of its residential population was black (Giglierano et al., 1988). Moreover, the overall population showed a steady decline. According to census data, Walnut Hills population declined from 16,718 in 1970 to 11,861 in 1980, 10,546 in 1990, and 9,426 in 2000 (Ghosh et al., 2009). The most recent estimates in 2010 show Walnut Hills’ residential population at as few as 6,495 (City of Cincinnati, 2012). Walnut Hills residents have also possessed lower median household incomes and higher levels of poverty and unemployment relative to Hamilton County overall (Ghosh et al., 2009).

Figure 5.4. Paramount Theater circa 1930s. Photo from: http://cincinnativiews.net/peebles.htm

Figure 5.5. Paramount Theater circa March 2017. Photo taken by Shannon Linning.

Since these post-war changes began, Walnut Hills has never been the same. Because of suburbanization as well as the reduction and change in income level in the neighborhood, there was a marked decline in the business district. Many stores at Peebles Corner catered to a middle

to high income level could no longer sustain themselves (Hill, 1983). Consequently, many shut down. In fact, with the exception of Will's Pawn Shop (which closed in 2005), there is no record of occupancy in the Paramount Theater—Peebles Corner's most iconic building built in 1931 (see figure 5.5 & 5.6)—since the early 1970s (Brownfield, 2017; Mitchell, 2017). As Hill (1983) describes,

> The result of these factors had their combined effect on the business district beginning in the early 1970s. One by one the old stores which had been located at Peebles Corner since before the war closed…In looking back over the postwar period in Walnut Hills, it was clear that a great number of factors were present to create a negative effect on much of the neighborhood. Deteriorated housing stock, construction projects and an ill-conceived federal program, brought about a population loss resulting in a community one-half its former size, unhealthy business districts, and a loss of institutions. The quality of neighborhood life had markedly decreased (Hill, 1983, p. 40).

Moreover, Hill (1983) also pointed out the paradoxical relationship that Walnut Hills had with transportation innovations. While it spurred neighborhood growth in the late 1800s, the shift toward the automobile and suburbanization ultimately lead to its decline in the mid-1900s.

Table 5.2. Walnut Hills Neighborhood Characteristics (From 2010 US Census)

Total Population	6,495	*Average Annual Income*	
Males	2,994	Less than $10,000	1,190
Females	3,501	$10,00 to $29,999	990
		$30,000 to $49,999	331
Race		$50,000 to $74,999	310
White	1,143	$75,000 to $99,000	141
African American	5,123	$100,000 or over	171
Other	90		
		Median Household Income	$19,885
Housing Occupancy		*Housing Tenure*	
Total	4,445	Total	3,337
Occupied	3,337	Renter Occupied	2,603
Vacant	1,108	Owned Occupied	734

From the 1970s onward, Walnut Hills remained in a state of disrepair. In addition to its previously mentioned population loss, the median household income is under $20,000 (see Table 5.2). According to the 2010 U.S. Census, 25% of the buildings in Walnut Hills were vacant and 78% were renter occupied (City of Cincinnati, 2012). In a 1987 study of the neighborhood, only 52% of the housing units were in good condition. All others were in sound, fair, or poor condition (Ghosh et al., 2009). Figures 5.6 to 5.8 illustrate the state of several buildings in the neighborhood. Recent crime statistics from the Cincinnati Police Department indicate that Walnut Hills now has one of the highest violent neighborhood crime rates in the city. Between 2012 and 2014, Walnut Hills has consistently remained the third highest neighborhood for various crime types (Gerard, 2016). For fatal and non-fatal shootings, it is only exceeded by the neighborhoods of Avondale and Over-the-Rhine. In the case of robberies, it is third only to Over-the-Rhine and Westwood. Moreover, it had the second highest homicide rate next to Over-the-Rhine (Gerard, 2016).

Figure 5.6. 900 block of East McMillan Street circa March 2017. Photo credit: Shannon Linning.

Figure 5.7. 1100 block of East McMillan Street circa October 2018. Photo credit: Shannon Linning.

Figure 5.8. 2400 block of Gilbert Avenue circa March 2017. Photo credit: Shannon Linning.

Despite the decline in the neighborhood, Walnut Hills has recently experienced a surge in reinvestment. Although a few developers have been producing some change in the neighborhood since the 1990s, the most notable changes began occurring around 2010. Much of this work coincides with the hiring of Kevin Wright as the Executive Director of the Walnut Hills Redevelopment Foundation (WHRF) in Fall 2011. Since assuming his role, Wright imposed a

place-based approach to redevelopment whereby he completed small address-specific projects in quick succession (for examples, see figures 5.9 to 5.11). His specific strategies will be discussed in more detail in chapter 7. This opposed the traditional, large-scale redevelopment strategy of most urban developers. Given the supposed high crime nature of the neighborhood (at least since the 1970s) and this place-based approach to redevelopment, Walnut Hills is an excellent study site to explore the Neo-Jacobian perspective. Studying this neighborhood allows me to examine whether change at places has an impact on neighborhood crime.

Figure 5.9. Fireside Pizza circa 2014. Photo credit: Aaron M. Conway
Retrieved from: https://www.cincinnatimagazine.com/citywiseblog/will-walnut-hills-rise-again/

Figure 5.10. The Hauck Building circa July 2018. Photo credit: Shannon Linning

Figure 5.11. The Dixon Building circa May 2018. Photo credit: Shannon Linning

The next chapter presents the first of three studies that test the Neo-Jacobian perspective. Focusing on Walnut Hills, I interviewed numerous people that have been involved in its redevelopment. Participants ranged from property developers to business owners, municipal employees, and residents of the neighborhood. My goal was to explore the mechanisms of property ownership and crime. As the findings suggest, much of the neighborhood's history described in this chapter has been attributed to Walnut Hills' rise and subsequent decline in crime.

CHAPTER VI.
STUDY 1: THE MECHANISMS OF PROPERTY OWNERSHIP IN NEIGHBORHOODS

> "*Sometimes you learn more about a phenomenon when it isn't there, like water when the well runs dry—or like the neighborhood stores which are not being built in our redeveloped city areas*" (Jacobs, 1956, p. 132)

Though some criminological research has examined the political economy of neighborhood crime (see Velez & Richardson, 2012; Velez et al., 2012), less work has investigated it from a place management perspective. Here, I conduct an exploratory and descriptive study of the mechanisms linking property ownership and neighborhood crime. To do this, I conducted a series of qualitative interviews with persons involved in the redevelopment of Walnut Hills. The guiding research question was: how does property ownership and place-based redevelopment impact neighborhood crime in Walnut Hills? Though my focus was on ownership and the change at places, I did not focus my attention exclusively on property owners. I sought to interview a wide range of people to gain a broader picture of the neighborhood. Specifically, I interviewed property developers, property owners, business owners, place managers, residents, municipal employees, banking officials, and employees of a community development corporation. Although I also conducted two quantitative studies (see chapters 7 and 8), these interviews provided me with insights into the neighborhood that no dataset could. Thus, not only do I present the findings for my qualitative study in this chapter, I also drew from information garnered in these interviews to help me interpret my quantitative results. As such, quotes derived from these interviews are presented throughout the next four chapters.

Methods

The purpose of this study is to explore the mechanisms of property ownership and redevelopment on neighborhood crime. To do this, I conducted face-to-face, semi-structured

interviews with people involved in the redevelopment of Walnut Hills. Prior to contacting possible participants, I received ethics approval from the University of Cincinnati's Institutional Review Board (see Appendix A). I used a purposive/criterion-based and snowball sampling strategy. I identified participants in three ways. First, I obtained contact information of participants through my pre-existing contacts with the former Walnut Hills Redevelopment Foundation director, Kevin Wright, and Institute of Crime Science operations manager and former Cincinnati Police Captain, Daniel Gerard. Second, I identified potential participants through on-site observation. I also identified businesses while walking or driving through the neighborhood or through Google Maps. To request interviews I entered the businesses asking to speak to the owner or manager of the business. I always left my business card with my contact information and asked if they would be willing to schedule an interview with me at a date and time that was convenient for them. Lastly, a snowball sampling technique was used to identify other participants. During many of my interviews, participants identified other individuals who they thought could provide valuable insights for my study. They would give me the email addresses or phone numbers of these individuals. I received permission from the original participants to mention them as the one who referred me to them in hopes that the next participant would agree to be interviewed.

Using these methods, I spoke with 21 individuals who were somehow linked to property ownership, management, or development in Walnut Hills. Readers should note that I only draw from data from 13 of those participants in this study. Because I used a snowball sampling technique, I received referrals to speak with some people who were not directly involved in Walnut Hills. Nevertheless, I chose to pursue the interviews to learn more from people involved in property ownership, management, and development. Six of these people helped me think

generally about the study, however, their work and/or experiences were not directly relevant to Walnut Hills. As such, their testimonies are not included in this chapter.

I spoke with people who are current or former business owners, developers, municipal employees, residents, community activists, police officers, place managers, property owners, nonprofit organization employees, and banking officials. Readers should also note that some participants held multiple titles. For instance, a participant could be both a resident and employee of the City of Cincinnati. To protect the identities of participants, I only provide pseudonyms in place of their names and their general role in the neighborhood. Another important detail is that many of these participants have been involved in the redevelopment of neighborhoods other than Walnut Hills. For example, many developers carry out several projects at a time and in multiple locations across the city. Although my questions focused primarily on Walnut Hills, they sometimes provided examples from other neighborhoods. I chose to include some of this testimony if it was relevant to the purpose of the study, namely the mechanisms of redevelopment to crime prevention. In my view, the examples illustrate their redevelopment strategies and they use these business strategies across all of their projects.

Prior to the interviews, I conducted literature reviews on place management and community criminology. From this investigation, I developed an interview guide. I designed the guide with a series of open-ended questions which also served to outline the intended format of the interviews (Hesse-Biber & Leavy, 2011). Generally, I used the first set of questions to understand the participant's role in the community. I followed this by asking them about the neighborhood (e.g., history, their opinions on why redevelopment was happening now). I used these questions to understand the history of the neighborhood and gain insight into why it was crime-ridden and impoverished prior to the new surge of redevelopment beginning in the 2010s.

I followed these discussions with participant-specific questions. Given the varying roles that participants have in Walnut Hills, I had to modify the interview guide for each interview. For instance, while I asked business owners about the functioning of their business (e.g., hours of operation, security measures), I did not ask these same questions to residents or employees from City Hall. An exemplar interview guide can be found in Appendix B. I also updated the interview guide after each interview as themes began to emerge to explore the unanticipated, yet relevant, topics.

Prior to each interview, I made sure each participant knew the intent of my study. I made it clear that their participation was voluntary and that they could withdraw from the study or refuse to answer any question at any time. I also explained that if I were to use testimony from their interview it would only be associated with a pseudonym and general description of their role in the neighborhood (e.g., Jennifer, resident; Michael, business owner). Other than knowing their names, I did not need to gather personal information such as their age, race, or level of education. I told them that any identifying information they provided would be confidential and made available only to me and my dissertation committee.

In order to maintain the integrity of the data, I took extensive hand-written notes and audio recorded the interviews when permitted by participants. Some participants asked not to be recorded. I took notes throughout the interviews on both the verbal responses and physical reactions that the participants provided. The use of the recording device allowed me to revisit the interviews, particularly in places where my notes were lacking. As themes began to emerge from several interviews, I transcribed corresponding portions of each interview verbatim to assure I accurately portrayed what the participant said.

The coding process facilitated my understanding of overarching patterns and themes found throughout the data. By reviewing hand-written notes take from the interview guides, which again were separated into different areas of focus, I organized the data into broad categories. Once I established these categories, I turned my focus to transcribing specific excerpts of the audio recordings. Once I took down the dialogue, I reviewed the categories again. I did this in case any critical information had been missed in the hand-written portion of the process.

I identified three broad categories within the data: 1. the impact of political decisions; 2. neighborhood control through (external) ownership; and 3. public characters and networks. I then referred back to my notes and transcripts to identify any direct passages that related to these categories. Several quotations by different participants conveyed similar information. I grouped these excerpts together and interpreted the data for explicit and latent meaning within the dialogue. From these interpretations, I identified 18 themes. In this chapter, I will focus on six of them. I chose to include them because they were the themes that were raised the most often by participants. That is, several participants provided insights into them.

Results

In this section, I discuss the six most prominent themes that I identified from the interviews (Table 6.1). As discussed above, these themes fall under the three categories that emerged from the data: 1. the impact of political decisions; 2. neighborhood control through (external) ownership; 3. public characters and networks. Below I describe each theme that emerged from the interviews accompanied by direct quotations from participants that they were drawn from. I also discuss these themes in context with the wider literature.

Table 6.1. Categories and themes that emerged from the interviews.

Categories	Theme	Description
The Impact of Political Decisions	1	"*Walnut Hills became a drive through and not a drive to*"
Neighborhood Control Through (External) Ownership	2	"*We can't control what happens until we control the real estate*"
	3	"*You've got to have people with skin in the game*"
	4	"*The health of the first floor is most important*"
Networks of Public Characters	5	"*You find somebody who knows somebody, who knows somebody*"
	6	"*I don't think there is anything that we couldn't help each other solve*"

Category #1: The Impact of Political Decisions

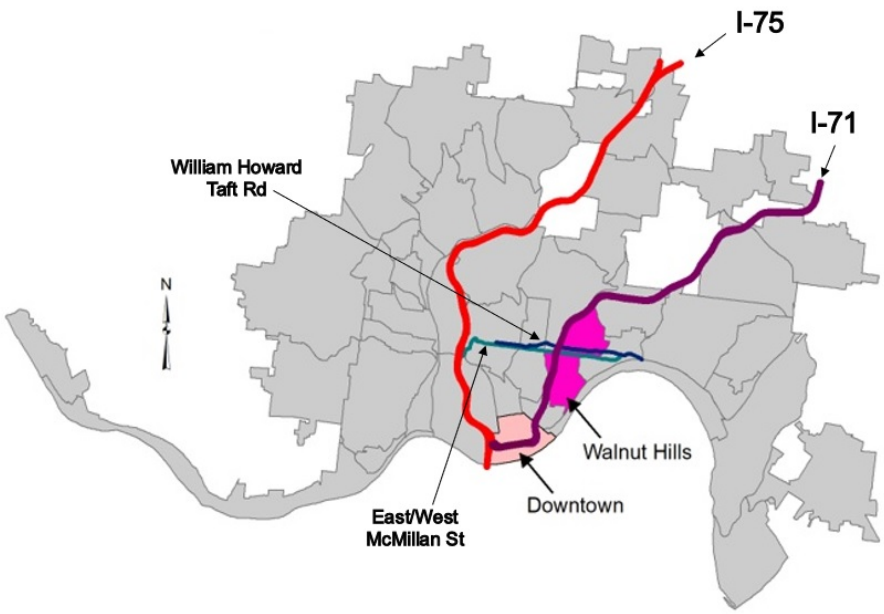
Theme #1: "Walnut Hills became a drive through, not a drive to"

Nearly all respondents described the same process of how the neighborhood became largely impoverished, crime ridden, and lacking in legitimate businesses: the conversion of East McMillan Street and William Howard Taft Road to one-way streets. Crime research literature suggests that street layouts can influence offending (Brantingham & Brantingham, 1993). Much of this literature is rooted in environmental criminology and focuses on the criminal event. Namely, the configuration of streets can facilitate or hinder crime (Beavon, Brantingham, & Brantingham, 1994; Davies & Johnson, 2015). For instance, robberies are more likely to occur on street corners where there are more escape routes (Summers & Johnson, 2017). Conversely, houses located on cul-de-sacs are less likely to be burglarized because there are fewer access points and their inward facing layout increases surveillance by neighbors (Johnson and Bowers, 2010).

My participants suggested that in Walnut Hills the importance of changing East McMillan Street and William Howard Taft Road to one-way streets invoked a different causal mechanism for crime than the mechanisms found in the environmental criminology literature.

The participants suggested that this conversion had a larger neighborhood effect on crime. Moreover, there were historical and political reasons for these changes.

Figure 6.1. Placement of Interstate 71 and 75 through Cincinnati.



As I described in the previous chapter, streetcars provided access to Walnut Hills and stimulated its early development. These streetcars were eliminated around the same time that the major interstate highway system was built. In fact, building Interstate 71 split Walnut Hills into two sections (see figure 6.1). In addition, the Federal government and State of Ohio constructed Interstate 75 approximately 2 miles west of the neighborhood and adjacent to the University of Cincinnati. The campus, and its numerous nearby hospitals, was at the time (and still is) a major employment center in the city. It is known as "Uptown", in distinction from "downtown", which is the central business district. East McMillan Street and William Howard Taft, the core east-west arterials through Walnut Hills, connected these new superhighways. They also provided an east-west commuter corridor from the Eastern neighborhoods within and outside of Cincinnati. To improve commuter flow to and from Uptown, the City of Cincinnati converted McMillan and

Taft into one-ways (Hill, 1983). According to several participants, this killed the Walnut Hills business district and increased crime.

> Walnut Hills was a place away from the city where the rich people built. The street car brought people up the hill. But once I71 and I75 were built McMillan and Taft became one-way streets to get people back and forth to the highways as fast as possible. Businesses died. There was no parking on the street. People drove really fast and didn't stop (Eric; Developer).

> One major highways came in, East McMillan and Taft were converted to one-way streets. Then no one stopped at the shops anymore. Walnut Hills became a drive through, not a drive to. As business declined, crime increased (Taylor; Resident).

> As far as the neighborhood goes, when 71 was built everything changed…We didn't experience any problems that I can remember, but when 71 came in, they took Taft and decided to make it a one-way street and this was already in the process before we even knew about it. Taft became one-way going east to west and McMillan had to go west to east. Now, it decimated the business district. Um, from 6 to 8 and 4 to 6, you can't park on the street at the time. Well that eliminated any morning things, well we didn't have any morning business, but it killed our afternoon and early evening because you can't park. Now that goes basically from Clifton all the way down… And then slowly, well actually quickly, the neighborhood got really bad in a hurry. People started selling out, the traffic flow was all screwed up. Um, people were frankly upset. We were caught, we were caught blindsided. So over time things deteriorated. Customer count went down. Crime went up…so over time, we knew that we didn't have enough parking, cars were flying down the street. Instead of going 30 miles per hour two-way, they were going about 50 miles per hour one way. So one-way streets decimated the business district (Steve; Business Owner).

This particular finding is not surprising given the history of Walnut Hills (see chapter 5). It is clear that participants' views align with much of the published literature on how political and economic decisions have changed the neighborhood. However, these historical accounts provide very little information about crime. Testimony from these participants give us more insight. Other sources have also argued that the neighborhood deterioration coupled with suburbanization was paramount to Walnut Hills' decline. In fact, Giglierano et al. (1988) believed that the perception of increased crime coupled with an increasing preference for suburban shopping centers substantially reduced customer activity at Peebles Corner.

Once established, there also appeared to be strong political reasons for keeping East McMillan Street and William Howard Taft Road in a one-way configuration. In fact, despite the desire for business owners in Walnut Hills to convert it back to a two-way street, employees at City Hall as well as employees and residents of other communities resisted it.

> The Walnut Hills Business Association asked business owners what they needed to survive. They said for East McMillan to become a two-way street. But the problem was that no one else wanted it (Taylor; Resident).

Those involved in Walnut Hills believed that the influence of well-connected and influential people who lived east of the neighborhood wanted it to remain a one-way street. The University of Cincinnati and Uptown hospitals also lobbied against changes. The main argument was that these streets were vital to move traffic through the city in the event of a car crash on the interstates. Others believed that it would back up traffic before and after major sporting events at the University of Cincinnati.

> I had to fight with our traffic engineers a couple times on that. And Kevin [Wright] pushed it through on the political side too. You know, there's a lot, especially with the city, let's not rock the boat. It's working. And the city understandably has other people's interests. So, in this case, you had all these jobs up here and [the UC area is] the second largest hub of employment and one of the city's concerns with going two-way was what happens if there is an accident on 71? How are people getting out of Uptown? Well they're going to take our streets. And all of the sudden, you convert Taft and McMillan to two-way and now you've clogged all our streets up and the employers in Uptown are mad at you because their employees can't get home. You know, so the city has a lot of push and pull on it and you have to take all of those factors in effect. All of these people that work in these hospitals and Uptown are inconvenienced, but guess what happens when, guess who gets yelled at when all the traffic gets backed up? It's not Kevin. It's the woman down at, or our traffic engineer, who gets the call when people can't get out of Uptown (John; Municipal Employee).

> The Clifton business people wanted it to be a one-way street all the way down to here… they were pushing hard with the city not to make that happen. Our business district and the area council were hell-bent to make this a two-way street again…you know, it's known as pill hill. It's got 4 or 5 hospitals, you've got UC, you know, you've got different colleges up there so their bigger congestion of people working and living over there is much greater therefore they have more say so in who does what (Steve; Business Owner).

Much of this fits with Jacobs' (1961) criticisms of how city planners prioritize automobile traffic within cities. Though she is a proponent of pedestrian-friendly streets, she is not against the use and integration of automobiles in cities. Instead, she simply argues that improving motor vehicle traffic flow will not solve other social and economic concerns. In fact, as seen here, it can adversely impact them. More specifically, she states that

> The simple needs of automobiles are more easily and understood and satisfied than the complex needs of cities, and a growing number of planners and designers have come to believe that if they can only solve the problems of traffic, they will thereby have solved the major problem of cities. Cities have much more intricate economic and social concerns than automobile traffic. How can you know what to try with traffic until you know how the city itself works, and what else it needs to do with its streets? You can't (Jacobs, 1961, p. 7).

Although it took a long time, business owners, residents, and developers with interest in Walnut Hills were able to convince the city to convert East McMillan Street and William Howard Taft Road back to two-way streets between Boone Street and Victory Parkway.[8] Several participants saw this as the catalyst for redevelopment in Walnut Hills. Namely, they believed this change was what brought commercial interest back to the neighborhood.

> McMillan changed to a 2-way street around 2012. We fought for it for yeas…I don't think all of the redevelopment that's happened here could have been done without that street being changed (Eric; Developer).

> You've got to have a solid business district. You've got to have people wanting to make a change and will do anything it takes to make the change. Turning McMillan into a two-way street was the best thing that ever happened. It slowed traffic down…These [new businesses] didn't come until this was a two-way street. That was the catalyst (Steve; Business Owner).

> Once they converted it to a two-way street it slowed everything in the neighborhood down. It's much easier to stop in at the businesses. One-ways are more highway-like and not conducive to a vibrant business community (Jeff; Developer).

[8] Since the conversion, stakeholders of the neighborhood have put additional pressure on the local government to extend the two-way movement even further east to Woodburn Avenue (see Simes, 2015 and https://eastwalnuthills.org/proposed-2-way-street-conversion/).

Interestingly, several cities have recently adopted this same strategy into their neighborhood revitalization plans. For instance, Ehrenhalt (2009) wrote the Vancouver, Washington has spent millions of dollars attempting to revitalize parks and old buildings that yielded little improvements. Then in 2008 they decided to open Main Street up to two-way traffic. He reports that the change revitalized the entire downtown corridor almost overnight. The business owners celebrated and claimed that they had "twice as many people going by as [we] did before" (Ehrenhalt, 2009, n.p.). Business started booming and that area of the city became a go-to place. According to Ehrenhalt (2009) several other cities—including Minneapolis, Louisville, and Oklahoma City—have converted important downtown streets to two-way. Several are claiming that it has drastically improved businesses within this areas. Thus, the positive effect reported in Walnut Hills may not be unique to this neighborhood.

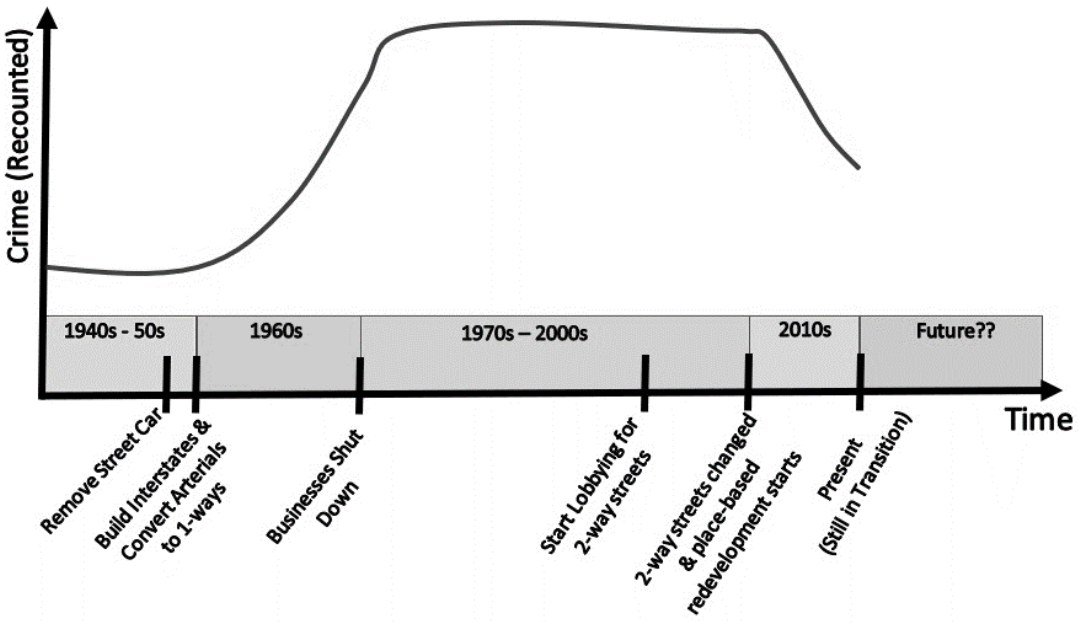
Overall, the political decisions made to convert the two main streets in Walnut Hills' business district appear to have a profound influence on the economic, and subsequently, crime activity in the neighborhood. In fact, in the 10-year redevelopment plan released by the Walnut Hills Redevelopment Foundation (WHRF), they state that

> "…the neighborhood has been negatively affected over the past couple of generations by concentrated poverty and misplaced investments in road widening, the interstate and the clearing of buildings for parking lots. Declines in education and employability coupled with the fraying and increasingly disconnected urban fabric have led, over time, to pervasive crime, elusive wealth building opportunities and disinvestment in both private properties and the public realm" (Walnut Hills Redevelopment Foundation, 2016, p. 8).

Information from these interviews indicates that the political decisions made several decades ago had a long term impact on the economic vitality of Walnut Hills. Once this declined, crime rose. This appeared to occur in a gradual process. Changes in crime as recounted by participants is shown in figure 6.2. To them, crime rose as a consequence of several government-imposed changes. These political decisions led to a decline in customer count thus forcing the

businesses in the neighborhood to shut down. However, more recent lobbying to convert McMillan Street and Taft Road to two-ways and the introduction of new redevelopment has allegedly lead to a more recent decline in crime.

Figure 6.2. Recounted crime trend in Walnut Hills, 1940s – 2019



The various components of this theme provide a new insight into how street configuration and traffic flow can influence crime. Prior research in environmental criminology suggests that street networks can encourage or inhibit crime by influencing access to targets, escape routes, and or guardianship (see Beavon et al., 1994; Davies & Johnson, 2015; Johnson and Bowers, 2010; Summers & Johnson, 2017). These suggest very circumscribed ways that street configurations can impact crime. However, the mechanism revealed here suggests broader impacts that influence commercial activity which produce economic ripples throughout the community. This process is largely economic in origin but impacts the social structure as well as crime. So while it stimulates crime, it is more indirect and diffused than how standard

environmental criminology explanations have understood it. Importantly, both can operate as they are not contradictory mechanisms.

Category #2: Neighborhood Control Through (External) Ownership

Theme #2: "We can't control what happens until we control the real estate"

Many participants attributed improvements in social conditions and crime in Cincinnati neighborhoods to redevelopment. Specifically, they claimed that changes in property ownership were paramount to changing neighborhoods for the better. In fact, when asked how much of the redevelopment in Cincinnati started happening, one participant said:

> The strategy was 'We can't control what happens until we control the real estate'. That's basically the [developer] model (John; Municipal Employee).

This idea of property control was also important to developers for their own profits. When asking one participant about how he was able to convince people to purchase or rent residential property in Walnut Hills as it was in its infant stages of redevelopment, the notion of control arose again.

> Buy as much property around your rehabbed places as possible. Then you control the area. When I'm trying to convince someone to rent one of my apartments [in a transitioning neighborhood] I can then point to properties all around it and say I'm going to do to those buildings what I did to this one, you're just coming in when the rent is cheaper (Eric; Developer).

To Eric, if you could show potential buyers or renters that more redevelopment was going to happen at the properties immediately surrounding the one he was trying to sell or lease, he was more likely to close the deal.

In another example, David expressed his willingness to purchase and renovate a building to further the development of properties he already had or those of his business partners.

> I spent $250,000 rehabbing the [anonymized] building. Why did I do it? I have business partners who had invested millions in the [adjacent] area. They wanted it to be a safe area that they control. If we had gone to the city to fix the problem, it wouldn't have happened

> or would've taken too long. So I took matters into my own hands, bought the building and fixed it myself. It was worth the $250,000 investment to me (David; Developer).

To David, purchasing the building and redeveloping it himself was a sound investment to aid the profit of his other buildings and those of his business partners. David was not the only person I interviewed who bewailed the slow, or no, pace of government action. Many participants pointed out the importance of having private money invested into these properties. This was captured in the next theme, described below.

Theme #3: "You've got to have people with skin in the game"

Although participants complained about government sluggishness, when I asked participants how neighborhood change could successfully occur, many of them highlighted the importance of having both public and private funding. Even though government funding and incentives were important, investment from private developers was ultimately the most important factor contributing to neighborhood redevelopment.

> To succeed, you must have public and private dollars. You cannot exist using public dollars alone. Who's going to put skin in the game? You need to find private investors (Taylor; Resident).

> To change neighborhoods, you need risk takers. You need entrepreneurs and stakeholders. The government will not do it, and especially not swiftly…You've got to ask who has skin in the game. It's not the renter, it's the owner. When I decide to buy something, it's my livelihood on the line. Owners care because they want to make a profit and something like crime is bad for my investment (David; Developer).

It was also apparent that it was important to have small businesses open in Walnut Hills because they were more likely to care about the neighborhood.

> [Chain stores] don't care. Because all they care about is making money. You don't become a part of the neighborhood. And a lot of people that come here want to be part of the neighborhood. I mean that nice [new business] that's going in there, it's a [first-time business owner] and he's really vested, the Redevelopment Foundation is investing. But he's investing. So he's got skin in the game. He's gonna care. If you've got money in the pot, you're gonna care. Hell, I want him to be successful…If you've got your own money in the game, you're gonna work at it to make it right (Steve; Business Owner).

The business owners also expressed the sacrifices they have chosen to make in order to open a business. For instance, when asked whether he was a resident of Walnut Hills, Morgan expressed the trade-off between wanting to buy a home in the neighborhood and being able to qualify for a business loan.

> In the future I think I could end up living here as long as I can afford it within my means. But I've been focusing more on the business aspect of it. That was one of the things as I was getting a little bit older, you know, I want to buy a house, I want to be a home owner, but at the same time if I take out a huge mortgage it's going to affect my debt-to-income, and my credit scores, so I might not have been able to get a business loan. So it was kind of like one or the other (Morgan; Business Owner).

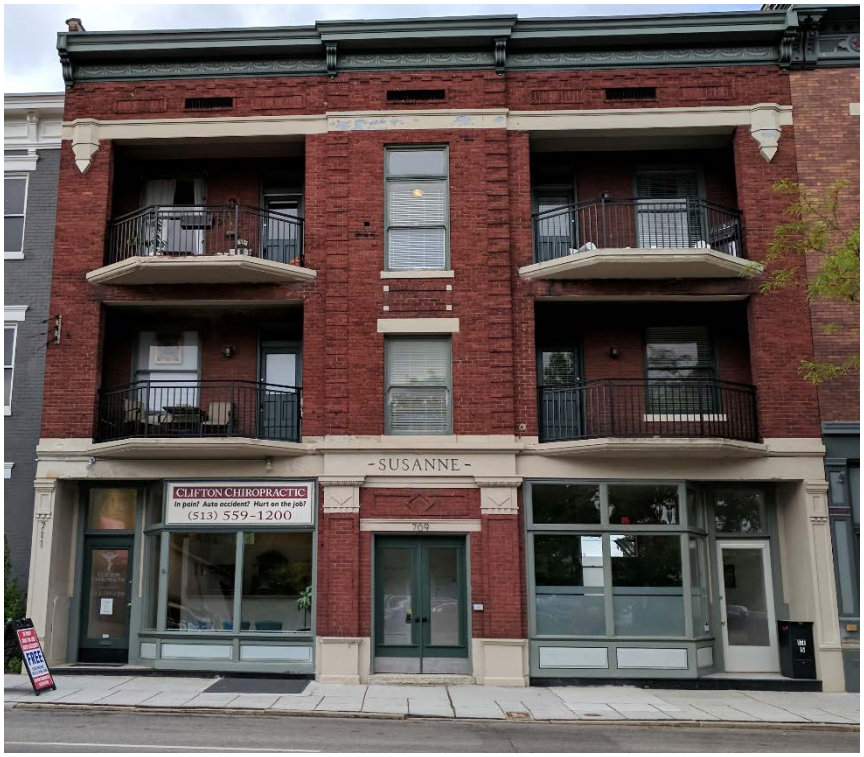
Morgan decided to temporarily forgo home ownership to increase his chances of qualifying for a small business loan. Without one, he would not have been able to start his business. However, there are no guarantees on these returns. Studies indicate that half of all small businesses fail within the first five years of opening, and only about one third survive longer than 10 years (US Small Business Administration Office, 2018). Thus, it is a sizeable risk for people to make such personal sacrifices in attempts to reap success through this type of investment. However, throughout the interview process, it became apparent that many business owners in Walnut Hills were interested in goals above and beyond profit. This leads to the fourth theme regarding the types of people who are now running businesses in the neighborhood.

Theme #4: "The health of the first floor is most important"

Many buildings, particularly in the business district of the neighborhood, were built with commercial space on the street level, and apartments above (for example, see figure 6.3). Many developers told me that the businesses they chose to lease to in their street-level properties were paramount. This was done for two reasons. First, businesses run by responsible owners who

cared was good for the neighborhood. Some developers told me that they made decisions simply because they thought it would be good for the people of the neighborhood.

Figure 6.3. The Susanne Building circa May 2018. Photo Credit: Shannon Linning



I only lease to people who seem to have a passion for what they do and who want to do good by the neighborhood. I will not lease to cell phone carriers, wig shops, tattoo parlors, check cashing places, and dollar stores…I won't lease to tax filing places either. Tons of them want to lease property in the neighborhood, so much so that they will even pay a year in advance. I don't think they're good for the neighborhood. They're only open for part of the year and don't care about the neighborhood (Eric; Developer).

I can get into a lot of trouble renting or leasing commercial property to the wrong people…When looking at who to lease to they have to be passionate and energetic. Many of them have a social mission. They want to make things better and contribute. Many times they just don't know how to (David; Developer).

They [the prospective business owners] must show what their vision is for the neighborhood and how they will contribute to it…we try to find people who like to be a part of a renaissance. Then they're part of a legacy (Jeff; Developer).

The second reason for leasing to responsible business owners who have good business ideas is profit. Ideally, they wanted unique businesses that attract attention from people both in and out of the neighborhood. To them, destination businesses create demand within neighborhoods. If done correctly, this would lead to profits in their apartment units above. When they create unique and trendy environments in a neighborhood, demand for housing increases leading to higher rents in the corresponding apartments. In fact this, strategy was so important to some developers, they even reported a willingness to subsidize the leases of their commercial spaces to people who they felt had potential.

> You need to have good/attractive businesses on the ground level to make profits overall. We're even willing to take a hit [financially] for the first year or so if we think the business has potential. We'll subsidize the rent for those new ideas (Jeff; Developer).

In redeveloping neighborhoods like Walnut Hills, uniqueness and character within the businesses are amenities. These developers believe that hip and trendy businesses will draw people to the neighborhood. As they spend time there, they begin to contemplate whether they would like to live there. If developers can bring enough of these unique places together, they argue demand for residential space will increase allowing them to make greater profits on their rental properties.

When I spoke with business owners who were leasing properties from these developers, they reported similar mentalities. Although they were driven by the desire to succeed in the business world, they also wanted to contribute to the neighborhood. When asked why he chose to open his first business in Walnut Hills, Jamie said he wanted to be

> "…where it's getting better, but for a fifth of the price. So that's kind of why it was so enticing. And it's getting better. And pretty soon this will be a baby OTR.[9] So I just wanted to get in early, be kind of like one of the founding fathers of the neighborhood, so to say, and you know, just make it great" (Jamie; Business Owner).

[9] OTR are the commonly used initials of "Over-the-Rhine", a neighborhood in Cincinnati that has recently undergone substantial redevelopment from a slum to a hip high-priced area.

Similarly, Jordan attributed much of the success in Walnut Hills' revitalized business corridor to the care and concern taken by the business owners involved.

> Jordan: It's easy to form a network when you all have a common goal. And I don't know if this is by design or not but the businesses that come in through the redevelopment foundation, they're about business, if that makes any sense. I mean, you can get business owners from all walks of life but if you get people in here who care about their business, who understand their business, who want to succeed, who are teachable and willing to do the work, usually those guys get along. And all of us, or at least me and the ones on either side of me…take criticism well.
>
> SL: They all recognize that there is room for improvement and they're willing to do that?
>
> Jordan: Yeah. I know I am, that's for sure! (Jordan; Business Owner).

An important take-away message from this theme, is the source of control. Not all business owners are looking to make a difference in their community. Some are motivated solely by profit. Most neighborhoods would likely prefer to have businesses whose owners are invested in the community and its residents. This is becoming a prominent trend in Walnut Hills. However, the challenge becomes how to make this happen. Information garnered from these interviews indicates that the way to do this is through the property owners. As implied above, many business owners do not own the physical properties in which their business is located. Instead they lease them from owners and developers. This means that the decisions made by property owners regarding which businesses get to rent their spaces are paramount. If a neighborhood wants to increase the number of responsible business managers who want to contribute to the community, they need to do so through property ownership. As one participant said, she attributed part of the success in Walnut Hills to working with developers who have a "social conscience" and who care about people (MacKenzie; Community Development Corporation Employee). In less prosperous neighborhoods, this is no easy feat. As discussed in the next theme, it requires strategic action by a small number of people who have political and

economic influence. This is crucial, particularly in the early stages of neighborhood redevelopment.

Category #3: Networks of Public Characters

Theme #5: "You find somebody who knows somebody, who knows somebody"

I arrived in Cincinnati well after redevelopment projects by Kevin Wright had begun and been completed. By 2015, several new businesses had opened and the Walnut Hills Redevelopment Foundation had secured many large-scale grants to fund additional projects. The neighborhood was receiving media recognition and many entrepreneurs had become interested in investing in the neighborhood. And this makes sense. When a neighborhood is up-and-coming, profits are more likely because it is an area with growing demand, but with lower property and rental costs. As a business owner, you want to open an establishment at a location that is likely going to draw in many customers. But as discussed above, the neighborhood was not always in this condition. So when I asked participants what got this surge of redevelopment started, many pointed to Kevin Wright as the orchestrator. When asked how to jump start change in a neighborhood, Taylor stated that:

> It's all about relationships. You find somebody who knows somebody, who knows somebody (Taylor; Resident).

Many participants believed that having the right people working for the neighborhood made a big difference. Notably, it did not have to be a large number of people. Instead, the work of a few key players made all the difference in turning the neighborhood around. To many participants, Kevin Wright was one of those integral people.

> [Prior to the opening of the Martin Luther King highway exchange] we knew as a business district, and there was enough support [for the two-way street] with the right people at the right time, and the Walnut Hills Redevelopment Foundation really came about with a guy named Kevin Wright. Brilliant guy. He really was the face that turned this place around. One of them. And it was big. He was able to make a lot of in roads

> with council. Um, a lot of great planning on his part. He got businesses and the community to work together. Um, and between him and [other business owners, developers, and community activists], he's done so much for the area…he knew everybody you needed to know, and he didn't know anybody when he first came here. He was the right person at the right time (Steve; Business Owner).
>
> We were very fortunate to have Kevin. I told people that I thought Kevin Wright was going to be the next JFK. He's very charismatic and smart and savvy. He knows how to talk to people. And he's a good salesperson. He did a really good job in presenting Walnut Hills to the outside world. So that's a big chunk of I think how this all got started (MacKenzie; Community Development Corporation Employee).
>
> Kevin absolutely stood out [during the hiring process at the redevelopment foundation] and it was like well this is easy. Because his undergraduate degree was in radio and TV broadcasting, and he could do public speaking and he could do all of that. He also knew how to access money (Les, Municipal Employee/Resident).

Many participants indicated that having an individual with both good redevelopment strategies and the ability to promote them to others was crucial to the success of the neighborhood.

But as important as Wright has been as a leader in the neighborhood, there were other people who played an important role in redeveloping the neighborhood. For example, when asked how to decide whether a building could (or should) be demolished versus restored, Les explained how his connections lead to the saving of a building.

> Basically you have to ask if it's a historic, nationally historic building. If someone can get 20% back for fixing it up, there's always somebody who will put the money in it. But um, when I saved the building next door, a local demolition guy he calls me up and says: did you know they've got me going through this brownstone house up here on McMillan? They want to bid on it and tear it down and he says I don't think this needs to be torn down. So I came and met him up here. I looked at the building and said yeah there's nothing wrong with it. There's a hole in the roof and you know, but he says let's go down here and meet the people at [anonymized contracting company]. So that's when I went down there to meet them. They're the ones doing all the work in [another neighborhood] restoring and stabilizing all of the historic buildings down there. And so we brought one of them up here and he went through and he said yeah, we can fix this. We can stabilize this. So that's when we went and got [local politician]. We went and got her ear. We told her that stuff and that's when she came on and got that money [to save the building] right away (Les; Municipal Employee/Resident).

Les was able to salvage a historic building because of his contacts in the city. Not only is he a resident of the neighborhood, but he also has worked for the City of Cincinnati, in real estate,

and development. Without his connections, the so-called "demolition guy" would not have contacted him to inquire about saving the building. Moreover, it may not have ultimately been saved had Les not had political contacts.

Beyond redevelopment, there are also some people—particularly business owners—who play an important role in maintaining safety and a sense of security within the neighborhood. For instance, when asked about relationships with the police department and arranging to have officers on site at his business, Steve noted that:

> I do it for a couple of reasons. One, I want my customers to be safe. Two, I want to keep the neighborhood, in and around the neighborhood, safe. So the officer who works for me, or works for us, who might work one or two weekend nights, I said you pick the nights. Let's be inconsistent with it. You know they see a cop sitting in the corner, they have a completely different attitude…No one's [i.e., offenders] around. It's great. The kids from [a school in the neighborhood] come down all the time. They know this is a safe haven. Sometimes they're okay to go to [another business nearby]. They know who we are, every one of them have our phone numbers. The principal and president, they all do. The kids can come here, be here, and then their parents can come and get them. We wanted, we needed that to be safe for them and we wanted that to be safe for them. And we managed to make it safe for them. So the parents, the kids, everybody, it's win-win. But in any other neighborhood, Shannon, if you don't have clean, safe neighborhoods, you will fail. You're doomed to fail. We've been blessed with a lot of good people who are committed (Steve; Business Owner).

Several points from this passage are important. First, Steve expresses a genuine desire for his customers to be safe. Second, it illustrates the collaborative relationship that many business owners try to maintain with the police. Lastly, Steve appears to be a well-known person in the neighborhood who many trust. His business has the reputation of being a safe place where children can spend time. Parents and school administrators are in contact with him and they work together to create a safe environment.

Steve's specific accounts relate closely to Jacobs' (1961) description of public characters. They are the ones who people in the neighborhood trust. In fact, she states that "storekeepers…enjoy an excellent social status, that of businessmen…they are the superiors"

(pp. 61-2). They are known figures in the neighborhood who most trust. An example of this would be Jacobs' (1961) account of shopkeepers having a dozen keys entrusted to them by people in the neighborhood (see Jacobs, 1961, pp. 59-60). When people go away for the weekend or need to leave a key for someone else to access their property, the shopkeepers are considered the most trustworthy persons in the neighborhood.

These testimonies relate to what Jacobs (1961) refers to as public characters. Though she refers to several types—anchored, roving, sidewalk, and specialized—her general definition of the term is as follows:

> "A public character is anyone who is in frequent contact with a wide circle of people and who is sufficiently interested to make himself a public character. A public character need have no special talents or wisdom to fulfill his function—although he often does. He just needs to be present, and there need to be enough of his counterparts. His main qualification is that he is public, that he talks to lots of different people. In this way, news travels that is of sidewalk interest. Most public sidewalk characters are steadily stationed in public places. They are storekeepers or barkeepers or the like. These are the basic public characters" (Jacobs, 1961, p. 68).

Jacobs (1961) also refers to herself as a specialized public character on her street because of her work fighting to stop construction of a major highway through Greenwich Village. To do this, she created a petition to protest the highway. This required her to distribute petition cards across several businesses in the neighborhood and promote her cause. Then she would periodically travel to the stores to collect signed cards and replenish the stock of new ones for signing. During this process she claims to have become the "sidewalk public character on petition strategy" (p. 70). Consequently, others began consulting her on how to fight for changes they wanted to see in the neighborhood. For instance, she said Mr. Fox the local liquor store owner asked Jacobs for advice on how to "get the city to remove a long abandoned and dangerous eyesore, a closed-up comfort station near his corner" (Jacobs, 1961, p. 70).

In Jacobs' (1961) example, it is possible for residents to be public characters. Her work is similar to that of Les. While she lobbying to prevent highway construction, he used his contacts to salvage a historic building in the neighborhood. However, most public characters are place managers, as she said "storekeepers or barkeepers or the like" (p. 68). People like Kevin Wright are well-known within the neighborhood and taking action to make desired changes. They are well-connected and know which public characters to consult when trying to achieve a goal or solve a problem.

Other participants alluded that Walnut Hills was trying to take on a model reminiscent of Jane Jacobs (1961) and her description of the "intricate sidewalk ballet" (p. 50). Specifically, that they want the owners or managers of these businesses to be the ones known in the neighborhood. That is, these shopkeepers serve as informal police of the streets in the neighborhood.

> John: What they [the Walnut Hills Redevelopment Foundation] have to do is find partners who are willing to share that vision…they have an interest in not having a tax guy that is only going to be open 4 months out of the year because that creates a dead spot. And that dead spot is where crime ends up happening.
>
> SL: So finding the good, responsible owners matters.
>
> John: Yeah, and then if you find the local owned guys, I mean it's kind of going back to what it was, back to the future where individual store owners owned their own, and then you see in the old movies where they walked out and swept off the sidewalk. You know? And then that guy knew who all the people were walking up and down the street. And if there was somebody who shouldn't be there, they questioned it. So that's what in this neighborhood, Walnut Hills specifically, you wanted to recreate. Local businesses that have a very vested interest in keeping the streets safe…Here [in WH] you're going to need to recreate places like, you know, the BBQ place, you know, where the manager knows everybody and goes out in the morning and sweeps the sidewalk (John; Municipal Employee).

John's emphasis on which types of businesses are best focuses attention on the street-level spaces. This relates back to the theme regarding the importance of the health on the first floor. In this example, the tax filing businesses create a dead space in the neighborhood because they do not have active shopkeepers who are looking out for the neighborhood all year long. John

believed that neighborhoods needed to find ways to attract businesses with owners who look out for the community's best interests. To him, place managers are the source of informal control within the neighborhood. This differs from the ecological view that residents are the source of informal social control (Sampson, 1986; Silver & Miller, 2004).

Theme #6: "I don't think there is anything that we couldn't help each other solve"

Lastly, the business owners expressed a strong willingness to help and look out for one another. This occurred on several levels. First, business owners were welcoming of incoming businesses, even if they provided similar services to the neighborhood. I had initially assumed that the owner of a coffee shop might be resistant to another opening close by. This could take clientele away from their business resulting in a decline in profits. However, this did not seem to be the case. For instance, during my interview with a first-time business owner, he explained that he was welcomed into the neighborhood.

> When we've talked to [business] owners, they've been here for, at least when we talked to them at the ground breaking they said we've been here for [many] months, you know hoping to get in at the ground level hoping for some change is on the cusp. But they said that they're very glad that we're coming because we are kind of that catalyst for some more change and I think with that being said it's like they're just waiting for us to open because once this whole business district gets filled out they're going to see the fruits of their labor at that point. Because somebody who might be coming to [our business] might want other food instead of what we have to offer so they're starting to get an influx of customers or maybe they want a cocktail for their last drink [at a different location] or before they head to our place. So they get more foot traffic (Morgan, Business Owner).

Instead, business owners saw the addition of new businesses as beneficial to the neighborhood. In the economic literature, this is often referred to as an agglomeration economy (see Villamil, 2010). The addition of a similar business at a nearby location creates competition between them thus drawing more customers to the area. Moreover, many businesses can choose to capitalize on their proximity. For instance, many establishments that serve alcohol will organize pub crawls to draw large numbers of customers to the neighborhood (Dodd, Khey, & Miller, 2012). A similar model has been seen with wine tasting events (Tanford, Montgomery, & Hertzman, 2012).

> For example, as far as bars and breweries go I think that's a pretty easy one because somewhere like OTR, like on Vine Street there are six bars all within a block radius and they all do very well. People kind of like bounce around. They're all successful because of the amount of people coming down just to be in that area allows those businesses to be successful (Morgan, Business Owner).

Having said this, no neighborhood wants to consist of only few types of establishments. In fact, some work suggests that areas with only storefronts, particularly consisting of similar businesses, can experience higher crime and disorder. Although shopkeepers may provide a good source of informal social control, this ceases to exist once their store closes for the day (Taylor et al., 1995; Wilcox et al., 2004). Thus, decisions regarding the type of business and where to situate it relative to others is very important from a crime prevention standpoint. From an economic standpoint, as Jacobs (1961) argued, variation can make neighborhoods immensely attractive to customers who may even opt to reside in the area once they realize all of the amenities it has to offer. Having diverse types of businesses can also improve surveillance of public and private space. There are several areas in Walnut Hills and East Walnut Hills where pairing businesses with different services will be beneficial. For instance, having a coffee shop next to a restaurant is a good fit. In a pilot study to this dissertation, I spoke with the place manager of a coffee shop who explained the benefit of sharing patio space with a restaurant next door. She told me that they knew the managers at the restaurant and looked out for one another. Moreover, their differing business hours were an asset to security. While the coffee shop opened at 6:30am and closed at 6:30pm, the restaurant did not open until 11am but closed at 10pm. These staggered hours of operation mean that there will always be employees present between these two businesses for around 16 hours per day despite the fact that each establishment individually is only open for 11-12 hours per day. As such, fostering good relationships between neighboring business owners and managers helps to protect the entire group. A similar relationship was explained by Jordan about his share outdoor space with another business:

> They're really accommodating, we're really accommodating too for what needs to happen on the patio. To have events out on the patio periodically is fine with us. If they have something that's drawing national attention or something, they'll give us a heads up because there will probably be a boost in our business. And vice versa. So in that way we share or collaborate. But when they start the majority of their functions it's like 9 or 10 o'clock and we close at 10. So we don't overlap. They might have live music out there, but we don't overlap much… But yeah I know those guys, I know the owner on the other side of us. We work really well together. You know they had some thefts on the patio and I have cameras on the patio so they were like hey, I need you to review the cameras. I mean, we're cool. I did (Jordan; Business Owner).

Lastly, participants explained the importance of having both new and experienced business owners in the neighborhood. Related to the previous themes, new businesses with unique ideas can create draw and demand in a neighborhood. However, having only first-time business owners may not be best for the neighborhood overall. There also needs to be more established ones who can provide advice and assistance to those who are still learning what it takes to run a business.

> Yeah, it would be really tough to have all first-time business owners. You do need somebody to just kind of bounce ideas off of. And draw from somebody with experience. That's for sure! (Jordan, Business Owner).

> Yeah absolutely. I mean I guess I can't see where there would be too much difference as long as the business themselves are successful. So there are a lot of new businesses where maybe they don't know how to run their businesses as well as someone who's been doing it for 10 years. But at the same time, as long as we have that community focus where you're saying maybe we can talk to each other and help each other out, I don't think there is anything that we couldn't help each other solve (Morgan, Business Owner).

At the same time, Steve—an experienced business owner—expressed that the more established owners watch to see how the new ones perform and handle problems. If the incoming owners do not manage issues accordingly, he said the neighborhood, particularly the established business owners would become involved.

> Steve: [An incoming business is] going to have problems when they first open up. I hope they don't, but they probably will. Because [certain people in the neighborhood] are probably going to try and force their will.
>
> SL: They're going to test them.

> Steve: Of course. Just say no. Just put a cop in there, and they probably will. I'm sure he'll be undercover in there and the neighborhood will be watching to see how they perform, how they handle situations. You know, there's a lot of vested interest in that area, and a lot of money. And if it becomes an issue, then they'll have to deal with the neighborhood, the business people. We don't back down. We're on a roll. We're not going backwards (Steve; Business Owner).

The success of all businesses in the neighborhood is felt at both an individual and collective level for the various reasons outlined above. Thus, established business owners who are vested in the neighborhood see to it that the incoming ones have someone to seek advice from. They also hold them accountable if they are not addressing problems accordingly. With the addition of each successful business, the neighborhood becomes collectively better. Consequently, all businesses benefit and typically see increases in patronage.

Discussion

Though several insights can be gained from this chapter, one overarching message is apparent: external, non-resident actors can have immense influence on neighborhood functioning. This power is wielded through the acquisition and ownership of property. Although place management has identified links between property ownership and crime (see Eck, 1994; Eck & Madensen, 2018), it focuses primarily on the properties themselves and not the context in which they are situated. While place management of individual parcels is certainly important, these results also suggest that we need to consider larger owner-based processes that are operating. For instance, many of the business owners that I interviewed did not own the properties they used. Instead, they leased them from developers. Having spoken to business owners, developers, and the like, it became very apparent that a network of property controllers existed in the neighborhood. Fortunately for Walnut Hills many of the developers take great measures to assure that the place managers who operate businesses on their property are

responsible, and seek to contribute positively to the neighborhood. Here, developers are essentially super controllers of these business owners (see Sampson, Eck, & Dunham, 2010).

This study also makes an important contribution by highlighting the decision-making processes of property owners. You may have noticed that many of these themes do not explicitly talk about crime or crime prevention. Instead, most of these themes relate to the last ORCA principle, namely the acquisition of resources (Eck & Madensen, 2018; Madensen, 2007). This principle has received far less attention in the place management literature. These results indicate how important these considerations are to decision-making. Unlike actors in the criminal justice system, place managers do not often think about crime unless it is a problem for them. As Moscowitz (2018) states, "cities do not gentrify unless the process is profitable for real estate developers…[and] it is developers' profit motive that causes massive, citywide change" (p. 37). Place managers make their living through their business. Thus they are highly motivated by profit and want to assure that customers return to their business. One factor that might influence their return is safety. Yet if crime is not interfering with this process, place managers need not take action. However, as David described (pp.102-3), purchasing a crime attracting building to make the adjacent area with some of his other properties safer is a worthwhile investment. Developers look to make the greatest profits possible. If, for example, one of the businesses within their building became a hotspot for crime, profits at their adjacent businesses and apartments would likely decline. This would incentivize the developer to take action against the place manager who is encouraging, or at least turning a blind eye to, crime.

Results from these interviews also point to several mechanisms operating beyond individual property parcels. For instance, the political decisions surrounding the changes in street configuration are believed to have created conditions that thwarted and then facilitated

businesses to thrive. While past work on street layouts has been used to identify the most suitable targets at a micro-spatial scale (Beavon et al., 1994; Davies & Johnson, 2015; Johnson and Bowers, 2010; Summers & Johnson, 2017), these results reveal additional economic impacts through a different mechanism that still influences crime. It is simply more indirect. These respondents believe that the economic vitality of businesses in their neighborhood is the primary factor that inhibits or creates crime. Thus, in the next chapter I examine how changing property parcels, particularly commercial businesses, in Walnut Hills influences neighborhood crime.

CHAPTER VII.
STUDY 2: PLACE-BASED REDEVELOPMENT & CRIME IN WALNUT HILLS

> "*Some plans have to be big, detailed, and stretch for years into the future because of their substance. A mundane example is a place for building a city subway system. Or to take a more romantic illustration, when a trip to Saturn is proposed, the planning has to be very comprehensive, very detailed and very much in control until the whole scheme is complete and the aim is finished. The plan has to be big or it is useless.*
>
> *It seems to me sometimes that many city and town planners must be frustrated space-travel planners. But pieces of our cities, or for that matter suburbs or even New Towns, are not going to take off for Saturn. They aren't going to take off for anywhere. The substance doesn't mandate big, comprehensive, tightly controlled planning the way either a subway system or a spaceship does. Little plans are more appropriate for city renewal than big plans*" (Jacobs, 1981, p. 177).

Although Walnut Hills has had its own Redevelopment Foundation since 1977, many participants reported that substantial change did not occur until Kevin Wright became the new Executive Director in 2011. His start of employment coincided with the conversion of East McMillan Street and William Howard Taft Road to two-ways streets in 2012. That is, Wright began working for the Walnut Hills Redevelopment Foundation (WHRF) when the change was approved and this was put into action within a year of him starting his role. Although the WHRF has always been focused on community building, Wright brought a unique strategy to the organization. I interviewed him several times between 2015 and 2019 and acquired a copy of his *Neighborhood Playbook* that he co-authored with Joe Nickol (2016).[10]

In this chapter I will describe the strategies used by Wright in redeveloping Walnut Hills. This will also include a discussion of how the partnership between the WHRF and Cincinnati Police Department lead to a place-based approach to addressing crime problems in the neighborhood. I argue that the outward factors described in the previous chapter play a vital role

[10] Additional information can be found on their website: http://www.neighborhoodplaybook.com/

in how neighborhood crime emerges and can be reduced. After describing these strategies, I provide an empirical test of this place-based redevelopment approach and its impact on crime in the neighborhood.

Walnut Hills' Place-Based Redevelopment Strategy

The WHRF hired Kevin Wright directly out of the Masters of Community Planning program at the University of Cincinnati in October 2011. Just prior to his hiring, the WHRF had stagnated. In fact, as one of the participants from chapter 6 commented that more work was being done in other neighborhoods than Walnut Hills, so the WHRF hired a new Executive Director. However, the new director

> "…started getting a lot of money organized for the neighborhood and then he passed away about 4 months after we hired him. Then we were thinking oh god, now what are we going to do? And that's when Kevin was getting out of school and all of these people we knew knew him and said he's your man. And it made that selection real easy" (Les; Municipal Employee/Resident).

However, he also recounted that Wright faced many challenges. In fact, the WHRF did not have enough money to even pay him a salary.

> "And then it was like 'here Kevin, you get the job'. We're going to give you $50,000 a year, now go find it because we don't have the money [laughs!]. You have to find it [laughs!]. And he went to LISC [Local Initiatives Support Corporation] and different places and got his salary and now there's like 5 people in the organization, or 6, that he hired…Kevin knew how to access money" (Les, Municipal Employee/Resident).

Many have attributed Wright's success and the success of Walnut Hills to his redevelopment strategies and his ability to network with the right people to fund projects. Overall, his position required him to oversee three main areas within the foundation: 1) organizational management of staff members, 2) real estate and economic development of property in the neighborhood, and 3) community outreach with community members and stakeholders in Walnut Hills (Wright, 2018).

Given his formal training at the University of Cincinnati, Wright had learned much about the traditional approaches to community planning and redevelopment. However, he also had an undergraduate degree in Mass Media from Missouri State University. Thus, he had exposure to communications and marketing. This also influenced his strategy that helped him fundraise for and redevelop the neighborhood. As Wright explained to me, the typical planning approach entails a very large vision for a community. To illustrate this, he used Peebles Corner in Walnut Hills as an example. This is a famous and historic intersection in the neighborhood that was once the thriving center of the neighborhood's business district and the largest interchange for the streetcars in the city. However, since the downturn of the neighborhood it became largely abandoned. The only remaining businesses there were check cashing facilities, tax filing businesses, and a bank. Wright said that most planners would do two things to try and fix this problem. First, they approach the redevelopment of this area in a very large-scale way. The tradition is to bring in planners and architects to draw up plans and diagrams of the multi-block area. That is, all four corner of the intersection would have to be re-envisioned and the dozens of property parcels would be repurposed. Second, they would argue that you need "rooftops before retail" in order for the project to succeed. This latter point means that you need to have enough people renting (or buying) residential space to create demand for retail businesses to move into the neighborhood.

To Wright, there were many problems with this approach. First, it would be too costly to carry out. Up to this point, the neighborhood had had little success in securing much funding to refurbish any part of the neighborhood. The redevelopment of all properties located in this intersection would cost millions of dollars. Moreover, the lack of investment in the neighborhood over the past few decades made Walnut Hills seem like a riskier investment to developers. Thus,

funding a large-scale project was highly unlikely. Second, there was no market demand for retail in the neighborhood. Because the business district had died out, business owners were unlikely to open stores or restaurants in the neighborhood even if new facilities were built. Third, it would be very difficult to convince locals to buy in to such a large-scale project. Such a plan from inception to completion could take close to a decade. Those who might attend an initial community meeting would not see swift results. Moreover, the finished product would probably be a variation of what was originally promised to the neighborhood. And more than anything, such an approach is even more difficult to sell to those who resist change. Residents are oftentimes resistant to changes in their neighborhood and plan for large-scale redevelopment can be overwhelming to them making them oppose it to an even greater extent.

There would also be a high likelihood that delays and or complications could stall or even halt the project altogether. Moreover, if the project was seen through to fruition, only a small portion of the neighborhood would have received attention. Lastly, it would be extremely difficult to increase the residential population of the neighborhood without improving its amenities. Walnut Hills had historically been a high crime neighborhood that is largely impoverished and abandoned (see chapter 5). Thus, fewer incentives existed to attract people to buy homes or sign leases to live in the neighborhood to create the demand needed to open businesses within it.

As Wright has said:

> "We're all addicted to the big project happening in our neighborhood. Historically, there's proof that doesn't work. What does seem to work: small projects and incremental change" (Wright as cited in Copsey, 2018, n.p.).

Wright's Approach to Redeveloping Walnut Hills

Wright said he took an alternative approach to redeveloping Walnut Hills. His strategy involved three phases: 1. Create economic demand for the neighborhood, 2. Redevelop a single location, 3. Create "walkable connections" with subsequent redevelopment projects. Much of the neighborhood needed attention, but to address this he decided the best course of action was to start small through building economic demand in Walnut Hills. First, he drew people out to an event to showcase the neighborhood. To do this, he decided to organize a neighborhood clean-up of Five Points Alley. The event was promoted using social media and word of mouth. He invited food trucks, held a beer garden, and played music. The event was largely a success and lead him to host others. But for the subsequent events he began inviting investors. At these events, the investors saw the numbers of people who showed up and saw their excitement and passion for Walnut Hills. In fact, during one of these events one of the food truck owners asked Wright about the old firehouse building. This owner saw the potential in the neighborhood and wanted to be a part of the change the WHRF was trying to generate. This eventually led him to convert his food truck business into a permanent business at the firehouse, a restaurant named Fireside Pizza (located at 773 East McMillan Street).

Once the Fireside Pizza project was started, Wright set his sights on something a little larger, albeit not too large: Trevarren Flats (located at 961 East McMillan Street). Two blocks east of this first project was another historic building built in 1895. This time around, the WHRF was able to partner with the Model Group, City of Cincinnati, and the Port of Greater Cincinnati Development Authority to redevelop Trevarren Flats which consists of a collection of three buildings: the Dominig, Hauk, and Trevarren (Koenig, 2015; Tweh, 2016). The project would generate a final product with 3 retail spaces on the street level and 30 apartments above. Through

immense collaboration, private investment, and tax credits, the $9 million project began in the neighborhood. Wright later stated that

> "Success at Trevarren is key to supporting other development projects nearby. This project makes a lot of other projects happen" (Wright, 2016 found in Tweh, 2016, n.p.).

Once Wright and the WHRF had shown the demand for redevelopment in Walnut Hills and established themselves as a viable agency for developers to work with, interest (and money) for projects increased exponentially. However, Wright's strategy was to still think small and use a place-based approach. One of his most unique ideas was to create what he called "walkable connections" (personal communication with Kevin Wright, April 2017). Again, Wright did not aspire to propose large-scale projects that would require changing dozens of property parcels. Instead, he thought it best to rehabilitate buildings one at a time.

But to maximize the benefits of this process and expedite economic growth in Walnut Hills' business district, he chose the locations of his projects carefully. He also explained that the initial projects should involve retail businesses, particularly restaurants, not apartments. He thought this for several reasons. First, a unique restaurant could draw customers in from all over the city. This would bring money into the neighborhood and if the customers were pleased with their experiences they would likely share it with their friends, co-workers, and families. Second, if people needed to wait for a table they might explore the neighborhood to see what else the neighborhood has to offer (e.g., they may discover a clothing boutique that they did not previously know existed). Lastly, he believed people would be more than willing to invest $20 in a meal and/or drinks in a neighborhood they are not sure about as opposed to signing a 12-month apartment lease within it.

These new retail businesses were then strategically placed along the main business corridor in the neighborhood, specifically East McMillan Street. Walnut Hills has historically

been known as a high crime neighborhood, thus he knew some people might be reluctant to spend their leisure time in a neighborhood where they did not feel safe. To abate this, he created walkable connections between the businesses. Specifically, he thought they should rehabilitate a property and open a restaurant. Then the next project would involve a building on the next block over, but within sight of the first one. This location might become a bar or brewery. Wright explained that if people were socializing at the restaurant first but wanting to extend their stay, they could see the bar down the street upon exiting the restaurant. The mentality being: We can go there, we can see it and make it there safely. He continued this strategy along East McMillan Street. Then once the first few projects were completed and created these walkable connections, subsequent projects could fill in the gaps between them. It should also be noted that Wright's views of walkability are also critical for residents because nearly 40% of them do not have vehicles for transportation (Walnut Hills Redevelopment Foundation, 2016, p. 20).

This strategy has successfully generated additional investment in the neighborhood. At the time of writing (Spring 2019), Walnut Hills is still undergoing a great deal of redevelopment. Many projects spearheaded by Wright have been completed and several multi-million dollar projects are currently underway (Brownfield, 2018; Demeropolis, 2019; Fast, 2018; Miller, 2019; Rogers, 2018a; Smith-Randolph, 2018). They range from a multi-million dollar rehabilitation project of the historic Paramount building (Brownfield, 2018; Demeropolis, 2019) to a 124-unit mixed-use apartment complex (Fast, 2018). Both projects are due to be completed by the end of 2019.

Using a Place-Based Redevelopment Approach to Addressing Crime

At the same time that Wright and the WHRF was trying to rehabilitate vacant and unused buildings in Walnut Hills, the Cincinnati Police Department (CPD) was continuing their attempts to reduce crime in the neighborhood. Shortly after Wright was hired, CPD assigned Daniel

Gerard as the new Police Captain of District 4 which contains Walnut Hills. Gerard saw what the WHRF was doing and devised a place-based approach to policing in the neighborhood. This included a collaboration with the WHRF to identify crime hotspots in the neighborhood and prioritize which buildings to tear down versus rehabilitate. Gerard began seeing the value in understanding how property ownership can influence where and why much crime happens.

Example: Red Point Market

For illustration, I will explain the strategy behind the removal of a crime hotspot in Walnut Hills, namely in the Red Point Market. Throughout the 2000s there were several persistent crime hotspots in the neighborhood. Many of these locations used businesses (e.g., night clubs and auto repair shops) as a front for criminal activity (e.g., drug dealing and money laundering). The Cincinnati Police Department made numerous efforts to reduce crime via raids and drug busts. In some instances, their efforts resulted in the arrest of several offenders within gang networks. Despite these efforts, crime would eventually return. Specifically, property ownership would be transferred to another member in the network who had not been arrested. These new owners would change the name of the business and re-open it shortly after. Not surprisingly, similar criminal activity would recommence (personal communication with Captain Daniel Gerard (Ret.), April 2018).

Once the WHRF hired Kevin Wright as their new director and the Cincinnati Police Department assigned Captain Daniel Gerard to District 4, and collaborative place-based approach was adopted to combat this problem. Both believed that property ownership was the key to creating or preventing opportunities for crime. Their first collaboration was to address crime at the Red Point Market. This location was a notorious place for crime, particularly drug dealing and money laundering. Through personal accounts I learned that the owner of this business facilitated crime in several ways. First, drug dealers regularly made their transactions

outside the entrance of the market. Moreover, to facilitate this process, the owner allowed offenders to store their illegal paraphernalia and weapons on the shelves in the store behind the goods on display for sale. Second, the owner was laundering money. For instance, he would take 20 dollars earned from drug transactions and exchange it with 19 dollars in "clean" money from his register. Lastly, his actions spread crime to nearby locations. Specifically, he would offer drug users enough money to purchase heroin or crack in exchange for goods such as laundry detergent that could be acquired at the pharmacy or grocery store across the street. Consequently, this increased the amount of shoplifting at these surrounding places. The owner would then place the shoplifted goods for sale on the shelves of his store at a slightly discounted price from his competitors (personal communication with Captain Daniel Gerard (Ret.), April 2018).

The place clearly produced a great amount of crime both at this address and at surrounding locations. However, the police department and WHRF were concerned that raiding the location would only act as a temporary solution to the problem. As described above, if ownership were transferred to someone else who facilitated crime, the offending would re-commence. Thus, the two organizations took a place- and ownership-based approach to eliminating the opportunities for offending. While the police investigated the owner's involvement in the drug dealing and other crimes, the WHRF began investigating details about the property itself. They discovered that there were several unpaid tax liens on the property. The city seized the property due to the unpaid taxes. Then the WHRF purchased the property from the city. Since the WHRF has acquired the property, the Red Point Market has remained closed. Crime no longer occurs at this address. As of spring 2019, the building is undergoing substantial renovations and will re-open with a new business on the ground-level, and apartment units above. Consistent with the WHRF model, leases for this location will be heavily vetted to assure

responsible, prosocial place managers are in control of the property (personal communication with Captain Daniel Gerard (Ret.), April 2018).

Changing Places In Walnut Hills

Given the above ownership-focused approach, several places are undergoing substantial redevelopment. Crime hotspots are being removed using a strategy akin to that used for the Red Point Market. Moreover, other buildings are being re-purposed for business and residential purposes. In this next section I describe a test of how the changing of places has impacted crime in Walnut Hills overall. As discussed in chapter 6, numerous respondents and historical accounts argue that high crime in Walnut Hills in the past few decades can be attributed to the loss of a thriving business district. Since the arrival of Kevin Wright with the WHRF, several new businesses have been established in the neighborhood while crime hotspots have simultaneously been shut down. The test I describe below consists of an empirical examination of the crime trend in Walnut Hills once this place-based approach began. Specifically, I assess how crime in the later part of the 2000s has changed.

I examine the following hypotheses:

Hypothesis 1: *The removal of crime hotspots will reduce neighborhood crime*.

Hypothesis 2: *The addition of well-managed places will reduce neighborhood crime*.

Data and Measures

The Cincinnati Police Department provided crime data for 2002 to 2016 from their computer aided dispatch (CAD) system. The data contain the date, time, and addresses for which each event occurred. Each case was then geocoded using ArcMap 10.3 to the corresponding address in the city of Cincinnati. Geographic data for the city were obtained through the Cincinnati Area Geographic Information System (CAGIS) website and the Hamilton County

Auditor's Office. These data contain the geographic coordinates of all addresses and land parcels in the city. They also provided files to represent the municipal and neighborhood boundaries within the city as well as the streets. According to the CAGIS data, there are 124,121 addresses within the city of Cincinnati, 3,305 of which are in Walnut Hills. Lastly, I created a timeline of changing places using information gathered from my interviews with participants from chapter 6, contacts at the City of Cincinnati, data from CAGIS and the Auditor's Office, as well as online media coverage (e.g., newspaper articles or video segments). Whenever available, this timeline included when ownership of a property changed, what month stabilization occurred (if needed), the month in which construction started, and the month in which the new establishment opened.

Table 7.1. Descriptive statistics, crime in Walnut Hills, Cincinnati, Ohio

Year	# crimes per year	Monthly Mean	Monthly Minimum	Monthly Maximum
2002	1035	86.3	67	108
2003	1045	87.1	52	117
2004	980	81.7	60	102
2005	1038	86.5	70	108
2006	1220	101.7	73	142
2007	1080	90.0	72	126
2008	997	83.1	56	107
2009	803	66.9	55	90
2010	760	63.3	40	89
2011	839	69.9	58	89
2012	754	62.8	48	82
2013	664	55.3	32	75
2014	611	50.9	32	65
2015	624	52.0	34	74
2016	710	59.2	45	73

For this study, crime is defined as all offenses including all variants (e.g., aggravated and non-aggravated offenses, as well as those committed with and without a weapon) of assault, burglary, homicide, robbery, theft, and vehicle theft. I created new shapefiles using ArcMap 10.3

that included only the incidents that met the above-mentioned definitions of crime. Next, I grouped these events by month to produce a dataset with 180 observations over the 15 year study period (see table 7.1). There was a total of 13,160 crimes over the 15 year time period with an annual average of 877 offenses per year.

In interrupted time series analyses one often tests the impact of a single intervention on a particular dataset. In many cases, such interventions have a precise start date and their effects are expected to begin immediately. As per the Red Point Market example, a change in ownership should have an immediate impact on crime at its location. That is, once the owner no longer controls what happens at the place, the opportunities to commit crime are removed. However, in this study I am also interested in how changes at multiple places influence neighborhood crime patterns. Moreover, I am interested in how Wright and Gerard's place-based approach impacted crime. This so-called intervention occurred over several months and does not have a precise start date. For instance, the month in which Wright became the executive director of the WHRF would not likely change crime in Walnut Hills. Wright had to devise a redevelopment plan, recruit volunteers, plan community events, and learn which developers and investors might be the best resources to reach out to for collaboration. This process takes time.

As such, I ran several different analyses using multiple independent variables. I created variables for each of the crime hotspots (e.g., the Red Point Market) that were removed. Similarly I created variables for each of the added places that opened during the study period. I also created some dummy variables with hopes to capture collective effects of multiple changed places. For this study, each place was considered changed when: 1. A change in ownership occurred at a crime hotspot (i.e., the removal variables), or 2. Construction started at a new location (i.e., the added variables). Dummy variables were created for each place whereby zeros

were assigned to the months that a crime hotspot was active and ones were assigned in the months where ownership changed. Similarly, the months before construction of an added place started were coded as zeros. I then coded months from construction start onward as ones.

It should be noted that I tested alternative definitions of intervention start dates. For instance, instead of using the construction start date of an added place, I tested the month in which the businesses opened. Overall, these alternative tests generated results similar to those presented below. I include ownership change and construction start date as my interventions for several reasons. First, I argue that the driving mechanism behind the crime reduction effect is rooted in the management of places (see Eck & Madensen, 2018). Thus, this effect will theoretically begin once new management takes over, even if the location does not re-open immediately. For instance, no crime has been recorded at the address that used to be the Red Point Market since it was shut down and ownership changed. As of spring 2019, construction has begun on this block of East McMillan Street. The WHRF plans to find a new occupant for this location, but this will not likely happen until late 2019. Despite this, the crime opportunity at this address has still been eliminated. Thus I can still test whether this change in ownership had an independent crime reduction effect above and beyond any underlying trend in the data. Second, research in the crime prevention literature suggest that anticipatory benefits can often occur prior to the start of an intervention (Smith et al., 2004). The mere presence of construction crews onsite can reduce or eliminate crime opportunities. Lastly, using change in ownership and construction as the intervention start date increased the number of independent variables that could be tested. As previously discussed, Walnut Hills is still undergoing redevelopment (change is ongoing even at the time of writing this dissertation – i.e., spring 2019) and I had access to crime data up until 2016. Several new businesses have opened since January 2017. But due to

data availability, I could only include the places that changed prior to this month. Using their change in ownership or construction start dates also increased the number of post-intervention observations that could be tested.

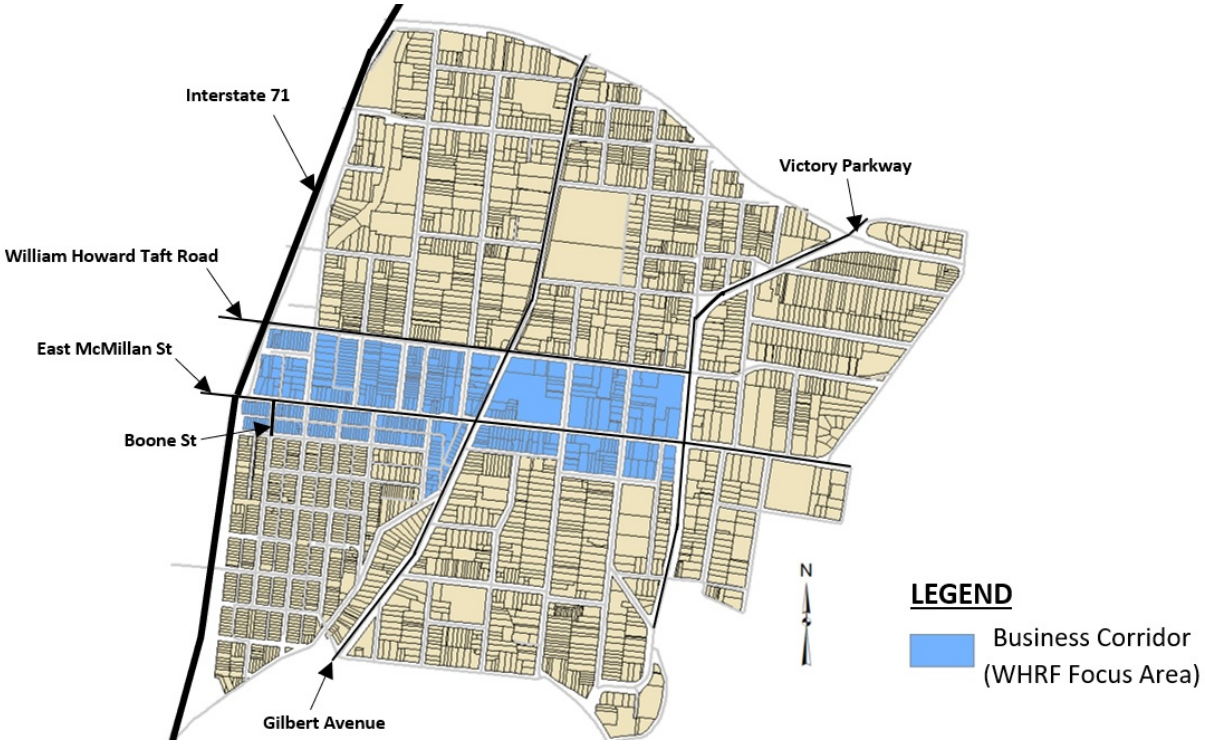
Table 7.2. Dummy variables used in time series analyses, Walnut Hills, Cincinnati, Ohio

Name	Classification	Date of Change
Boom Boom Night Club	Hotspot Removed	January 2009
Frog Da Great's	Hotspot Removed	October 2011
Red Point Market	Hotspot Removed	April 2013
Sengam Auto Repair	Hotspot Removed	April 2013
Fireside Pizza	Place added	December 2013
Dollar Store	Hotspot Removed	May 2014
Five Points Alley	Place added	May 2014
St. James Cut	Hotspot Removed	August 2014
Greenman Park	Place added	November 2014
Trevarren Flats	Place added	December 2014
Just Q'in	Place added	December 2014
Video Archive	Place added	December 2014
The Cure	Place added	December 2014
Gomez	Place added	May 2016

Table 7.2 shows the months in which crime hotspots changed ownership (i.e., "Hotspot Removed") or construction of a new business started (i.e., "Places Added"). Only the Boom Boom Night Club—a known gang hotspot—was removed prior to Wright's arrival at the WHRF. All other locations were changed while he was working with the WHRF. Readers should also note that crime hotspots were removed earlier in the timeline followed by the addition of new businesses. There was a little overlap when Fireside Pizza and Five Points Alley changed prior to the change in ownership of the St. James Cut. It should also be noted that some places changed in the same month (e.g., the closing of the Red Point Market and Sengam Auto Repair). In these instances, I created a single dummy variable representing all places that change in that month. As mentioned above, the WHRF focused their redevelopment efforts within the main business corridor in Walnut Hills. Specifically, these projects occurred on properties located along East

McMillan Street and William Howard Taft Road between Boone Street and Victory Parkway (see figure 7.1).

Figure 7.1. Study Area, Walnut Hills, Cincinnati



As mentioned above, I also created several dummy variables meant to represent the aggregate effect of changed places in Walnut Hills. Again, pinpointing the precise start date of all activity was not easily identifiable. It would have taken time for the strategies devised by Wright and Gerard to take hold. Wright's employment start date or Gerard's date of becoming District Captain would not suffice. As such, I created three dummy variables to test whether varying start dates of this aggregate variable would generate different results. The first variable was coded as zero until January 2013 when subsequent observations were coded as one. This variable was meant to represent approximately 18 months into Wright's time as executive director of the WHRF and 5 months into Gerard's time as Captain. I created this variable to test

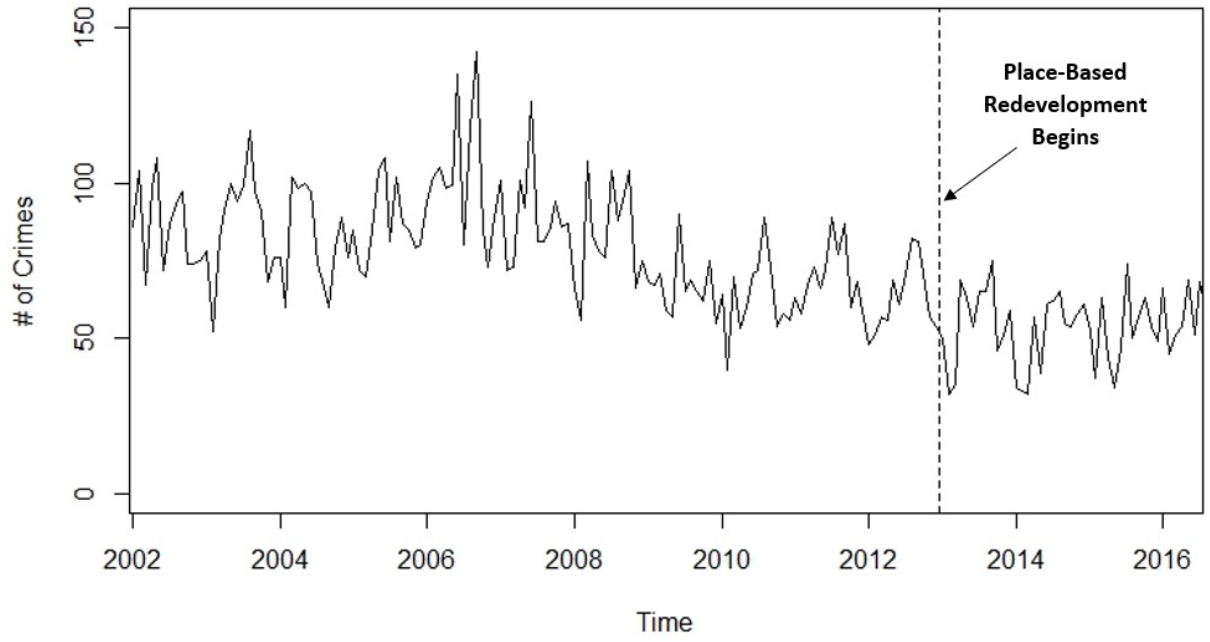
whether some effect independent of the concrete change of a place had an independent effect on neighborhood crime. The subsequent two variables represent the observable change in ownership of specific structures. The second variable was coded as zero until April 2013 when subsequent observations were coded as one. This version of the variable coincided with the removal of the Red Point Market. This was the first hotspot removed from the neighborhood through collaboration with the WHRF and Cincinnati Police Department. Lastly, the third variable was coded as zero until December 2013 and subsequent observations were coded as one. I created this variable to capture the addition of Fireside Pizza—the first business to come online through Wright's efforts with the WHRF—along with subsequent changes brought about through their place-based approach.

Analysis

Figure 7.2 shows the number of crime events committed per month in Walnut Hills between January 1, 2002 through December 31, 2016. There are 180 months in the time series. If January 2013 is used as the start date for the place-based intervention[11], in the 143 months prior to when the place-based redevelopment began, there was a mean of 78 crimes per month. In the 36 months following the place-based redevelopment, there was an average of 54 crimes per month. This represents a 31.7% decrease in the mean number of crimes committed in Walnut Hills following the place-based approach. A t-test comparing the mean number of crimes committed before and after the redevelopment approach began was statistically significant ($t = 11.002$, $df = 129.75$, $p = 0.00002$). This suggests that the place-based approach had an impact on crime in Walnut Hills.

[11] Note: These statistics were computed using April 2013 and December 2013 as the intervention start dates and they both showed decreases in neighborhood crime post-intervention.

Figure 7.2. Number of crimes in Walnut Hills per month, January 2002 to December 2016



However, using a t-test does not account for the possibility of correlated errors. Specifically, residuals in time series data are often correlated with nearby observations or corresponding ones from prior years (Brantingham & Brantingham, 1984; Wooldridge, 2009). This violates the assumption that errors are independent of one another (Maguire et al., 2017). Similarly, seasonal fluctuations in crime are well-known in the literature (Andresen & Malleson, 2013; Hipp et al., 2004; Linning, 2015). Without accounting for these trends, results can be biased. Thus, I opted to use time series analyses to control for these potential effects and produce more accurate estimates. I performed several sets of time series analyses using different model specifications, estimation methods, and variable definitions to test the robustness of this place-based redevelopment effect.

To account for temporal autocorrelation in the data, I used Autoregressive Integrated Moving Average (ARIMA) time series analysis which allowed me to use the Box-Jenkins approach (Box & Jenkins, 1976). However, analysts must undertake several steps and diagnostic

tests to best specify their ARIMA models. This includes correctly specifying its three components: "*p* refers to the autoregressive component of the model, *d* refers to the integration or trend component, and *q* refers to the moving average component" (Maguire et al., 2017, p. 748). I carried out several diagnostic tests using R (version 3.5.2).

ARIMA models assume that model residuals are normally distributed. Initial assessment of the data found this to be true. However, when I log-transformed the data, they were even more normally distributed. There were no zero values in the data, so carrying out this transformation did not create any issues. Although the logged data better fit the normality assumption, the resulting estimates are more difficult to interpret. Thus, I tested the same models using non- and log-transformed data to see whether substantive differences in results appeared. These analyses yielded very similar results. Specifically, the direction of relationships and their corresponding p-values were the same. As such, the non-transformed results are presented in this chapter. Results for the log-transformed data can be found in Appendices C through E.

I began by using the auto.arima function in R to generate two suggested best fit ARIMA model specifications per the function's algorithms (Hyndman & Khandakar, 2008). The program determines the number of differences using the KPSS tests and determines the values of p and q by "minimizing the AICc after differencing the data d times" (Hyndman & Athanasopoulos, 2018, p. 244). It suggested the use of either ARIMA (0,1,2) or ARIMA (0,0,1) models. Both models suggest lags of forecasted errors (i.e., moving averages), two in the first model and one in the second. Neither model suggests including autoregressive terms. However, the first model suggests the use of first-order differencing, while the second does not. Given the differences between these results, I also assessed the correlogram, partial correlogram, and several statistical model fit tests for further guidance on how best to specify the ARIMA models.

Though monthly crime was highest in September 2006, there was no overly discernable trend in the data overall. Moreover, results from several diagnostic tests suggested that the data were stationary and no differencing was needed. Specifically, the augmented Dickey-Fuller test ($t = -5.61$, $p < 0.01$), Phillips-Perron test ($t = -6.145$, critical value = -2.877) and Kwiatkowski-Phillips-Schmidt-Shin (KPSS) test ($t = 2.56$, critical value = 0.463) generated p-values less than 0.05 or exceeded their corresponding critical values. Thus, I could reject the null hypothesis that there is a unit root and conclude that the time series is stationary (Dickey & Fuller, 1981; Kwiatkowski et al., 1992; Phillips & Perron, 1988).[12]

I also computed a test of serial correlation in errors using the Ljung-Box test (Ljung & Box, 1978). Several tests revealed that such autocorrelation was present. Thus, I also inspected the autocorrelation function (ACF) and partial autocorrelation (PACF) plots of the time series to determine whether autoregressive or moving average terms were needed. Overall, these diagnostics revealed no need for an autoregressive (AR) component, but they did show a need for moving average [MA(1) or MA(2)] terms. These results align with the model specifications provided through the auto.arima function. However, MA terms have been known to partially cancel an order of differencing that has been added (Nau, 2018), hence the likely suggestion for first-order differencing when accompanied by an MA(2) term.

Given these diagnostics, the ARIMA (0,0,1) appeared to be the most appropriate model overall. Results using this model specification will be discussed henceforth. However, because the primary goal of ARIMA is to specify *p*,*d*,*q* values such that the residuals are uncorrelated—thus producing more accurate estimates than linear regression models—I also re-analyzed all

[12] Note: As a sensitivity test, I also ran models using non-differenced data that included various trend variables (e.g., squared and cubic terms). Results from these models were very similar to those presented in this chapter. This provided additional support that use of differenced data was not necessary in the analyses.

models using an ARIMA (0,1,2) specification to see if results diverge. With the exception of the p-value of one coefficient in one of the models reported below, I found little to no difference in the results.

In the next section, the results are presented in the following order. First, I separate models using each individual changed place as an intervention. This meant including only one dummy variable that either represented a removed hotspot or an added place. Second, I computed models that included all of the removed hotspots. This was done to examine whether the impact of removing places changes when controlling for the removal of others. Third, this process was repeated using the added places. Lastly, I generated several models using the aggregate redevelopment variables. Here, the idea was that while the removal or addition of specific places might not have an individual significant impact on reducing neighborhood crime, their aggregate effect could. Moreover, I wanted to test whether the aggregate effect of removing places has a significant influence above and beyond the effects brought about by removing hotspots. Thus, I generated two types of models. The first included only the aggregate redevelopment variable meant to capture when work by the WHRF under the supervision of Kevin Wright took effect. The second included that same aggregate redevelopment variable and a dummy variable for when the first hotspot was removed. If redevelopment by the WHRF had an impact on crime above and beyond the effect of removing hotspots, both estimates should be statistically significant and negative in the models.

Results

The first set of results show the individual models that included only a single changed place (see table 7.3). For example, I ran a model where the dummy variable for the Red Point Market was the only variable included in the model. Similarly, this was done for all of the

"places added" variables. I did this to test the independent effect of changing each individual place. Overall, the effect of each variable generated a theoretically expected result. With the exception of Gomez Salsa ($\beta = -9.765$, $p = 0.258$), variables for each removed hotspot and each added place showed a statistically significant decrease in crime.

Table 7.3. ARIMA (0,0,1) analysis of each changed place on neighborhood crime, 2002-2016.

Model	Place Changed	Classification	Estimate (S.E.)	Constant	Moving Average [Lag=1] (S.E.)	Log Likelihood	Sigma Squared	AIC
1	Boom Boom Night Club	Hotspot Removed	-27.887*** (2.612)	87.958*** (1.910)	0.250*** (0.069)	-731.0	197.20	1470.01
2	Frog Da Great's	Hotspot Removed	-25.907*** (3.083)	82.151*** (1.830)	0.333*** (0.063)	-741.6	221.70	1491.20
3	Red Point Market/Sengam Auto	Hotspot Removed	-23.015*** (3.717)	78.836*** (1.870)	0.375*** (0.061)	-752.74	250.90	1513.47
4	Dollar Store	Hotspot Removed	-21.399*** (4.483)	76.879*** (1.909)	0.425*** (0.059)	-758.51	267.40	1525.01
5	St. James Cut	Hotspot Removed	-19.751*** (4.697)	76.258*** (1.907)	0.418*** (0.058)	-760.88	274.60	1529.76
6	Fireside Pizza	Place Added	-23.391*** (4.052)	77.891*** (1.852)	0.388*** (0.060)	-754.54	256.00	1517.08
7	Five Points Alley	Place Added	-19.980*** (4.852)	76.072*** (1.904)	0.423*** (0.058)	-761.16	275.40	1530.32
8	Greenman Park	Place Added	-19.807*** (4.949)	75.936*** (1.907)	0.427*** (0.058)	-761.55	276.60	1531.10
9	Trevarren/Hauck/Dominig	Place Added	-19.777*** (5.041)	75.821*** (1.907)	0.429*** (0.058)	-761.82	277.50	1531.64
10	Gomez	Place Added	-9.765 (8.636)	73.493*** (1.910)	0.453*** (0.056)	-768.42	298.50	1544.84

† p < 0.10; * p < 0.05; ** p < 0.01; *** p < 0.001; N = 13,160

Next I computed models that testing the collective impact of removing the crime hotspots. As see in table 7.4, with the exception of the St. James Cut, all variables produced negative estimates suggesting a reduction in crime following their removal. In the case of the Boom Boom Night Club ($\beta = -20.635$, $p < 0.001$) and Frog DaGreat's ($\beta = -9.338$, $p < 0.05$), the declines were statistically significant. Estimates for the Red Point Market/Sengam Auto and Dollar Store were not statistically significant, but did produce negative coefficients in the theoretically expected direction. Thus, once the removed place variables are tested together in a model, the impact of some variables are affected. Instead, it appears that the strongest crime reduction effect starts with the first removed variable and this effect decays with each hotspot that is removed. Moreover, results did not substantively differ when the models were re-run using the ARIMA (0,1,2) specification.

Table 7.4. Time series analysis of removed places on neighborhood crime, 2002-2016.

		ARIMA (0,0,1)			ARIMA (0,1,2)		
Month of Change	Variable	Estimate	Standard Error	z-value	Estimate	Standard Error	z-value
(01/2009)	Boom Boom Night Club	-20.635***	3.405	-6.060	-20.630***	3.426	-6.022
(10/2011)	Frog Da Greats	-9.338*	4.832	-1.933	-9.359*	4.860	-1.925
(04/2013)	Red Point Market/ Sengam Auto Repair	-2.840	5.981	-0.475	-2.801	6.015	-0.466
(05/2014)	Dollar Store	-3.291	10.011	-0.329	-3.371	10.059	-0.335
(08/2014)	St. James Cut	4.182	9.462	0.442	4.238	9.508	0.446
Model Statistics							
	Moving Average (Lag = 1)	0.222**	0.0717	3.091	-0.774***	0.074	-10.526
	Moving Average (Lag = 2)				-0.226**	0.072	-3.147
	Constant	87.989***	1.817	48.417			
	Log Likelihood	-726.12			-724.98		
	Sigma Squared	186.8			187.8		
	AIC	1468.24			1465.97		

† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; N = 13,160

Table 7.5 shows the results for the time series models of places added. Here, an even greater change occurs. When all added places are placed in the same model, all but Fireside Pizza (β = -26.498, S.E. = 6.979) are no longer statistically significant. Moreover, several variables generate positive estimates. It should be noted that the estimates for Five Points Alley (β = 2.999; S.E. = 16.664) and Greenman Park (β = 1.459; S.E. = 17.822) have a relatively small magnitude influence. However, the magnitude of the effect for Gomez (β = 9.403; S.E. = 8.991) is more substantial. Lastly, there are few differences in results across models when using the ARIMA (0,1,2) specification. The most notable changes are the loss of statistical significance for the Fireside Pizza variable (β = -8.981; S.E. = 8.197) and the increase in effect size for the Trevarren Flats building (β = -3.839; S.E. = 14.380).

Table 7.5. Time series analysis of added places on neighborhood crime, 2002-2016.

		ARIMA (0,0,1)			ARIMA (0,1,2)		
Month of Change	Variable	Estimate	Standard Error	z-value	Estimate	Standard Error	z-value
(12/2013)	Fireside Pizza	-26.498***	6.979	-3.797	-8.981	8.197	-1.096
(05/2014)	Five Points Alley	2.999	16.664	0.180	2.245	14.492	0.155
(11/2014)	Greenman Park	1.459	17.822	0.082	2.694	17.247	0.156
(12/2014)	Hauck/Trevarren/Dominig	-3.185	16.382	-0.194	-3.839	14.380	-0.267
(05/2016)	Gomez	9.403	8.991	1.046	8.854	8.456	1.047
Model Statistics							
	Moving Average (Lag = 1)	0.386***	0.061	6.352	-0.687***	0.073	-9.472
	Moving Average (Lag = 2)				-0.173*	0.072	-2.409
	Constant	77.882***	1.843	42.252			
	Log Likelihood	-753.84			-731.38		
	Sigma Squared	254.000			205.800		
	AIC	1523.69			1478.77		

† p < 0.10; * p < 0.05; ** p < 0.01; *** p < 0.001; N = 13,160

Table 7.6. Times series analysis of aggregate redevelopment on neighborhood crime, 2002-2016.

Variable	Model 1 ARIMA (0,0,1)		Model 2 ARIMA (0,0,1)		Model 3 ARIMA (0,1,2)		Model 4 ARIMA (0,1,2)	
	Estimate (S.E.)	z-value	Estimate (S.E.)	z-value	Estimate (S.E.)	z-value	Estimate (S.E.)	z-value
Aggregate Redevelopment	-25.32*** (3.479)	-7.278	-11.372*** (3.336)	-3.409	-12.65* (0.104)	-1.634	-11.371*** (3.357)	-3.388
First Hotspot Removed			-22.234*** (2.961)	-7.510			-22.234*** (2.979)	-7.464
Model Statistics								
Moving Average (Lag = 1)	0.351*** (0.062)	5.663	0.207** (0.071)	2.912	-0.691*** (0.072)	-9.621	-0.788*** (0.073)	-10.794
Moving Average (Lag = 2)					-0.173** (0.071)	-2.434	-0.212** (0.071)	-2.970
Constant	79.838*** (1.806)	44.208	87.988*** (1.791)	49.132				
Log Likelihood	-747.56		-725.57		-731.26		-724.44	
Sigma Squared	236.90		185.6		205.50		186.70	
AIC	1503.12		1461.14		1470.52		1458.89	

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; N = 13,160

Finally, table 7.6 shows the results from the models using the aggregate redevelopment variable. As a sensitivity check, I computed the models using the ARIMA (0,0,1) specification (models 1 and 2) and the ARIMA (0,1,2) specification (models 3 and 4). Models 1 and 3 include only the aggregate redevelopment variable where the start date was January 2013.[13] Regardless of specification, these models indicated that the aggregate influence of redevelopment in Walnut Hills had a statistically significant crime reduction effect ($\beta = -25.32$; S.E. = 3.479, $p < 0.001$). When I added a dummy variable to represent the first hotspot removed, the estimate for the aggregate redevelopment remained statistically significant and negative, but declined in the magnitude of the effect ($\beta = -11.372$; S.E. = 3.336, $p < 0.001$). The hotspot removed variable ($\beta = -22.234$; S.E. = 2.961, $p < 0.001$) was also statistically significant, negative, and had a larger effect size than the aggregate redevelopment variable. Thus, the place-based strategy used by the WHRF appears to have an aggregate crime reduction effect even when controlling for the removal of hotspots. It is a smaller effect, but still a significant one.

Discussion

In this chapter I examined how changes at places influence neighborhood crime. Walnut Hills has been undergoing redevelopment using a place-based strategy since the WHRF hired Kevin Wright as their executive director. His strategy coupled with a collaboration with the Cincinnati Police Department created a strategy whereby hotspots were removed by arresting offenders and taking over ownership of the property where crime was occurring. Redevelopment at both these former hotspots and other sites (e.g., previously vacant buildings) appears to have had an effect on crime in the neighborhood. However, the results of the time series analyses do

[13] Recall, as a sensitivity check I tested this variable using difference start dates. With the exception of the April 2013 start date, all aggregate redevelopment variables yielded negative coefficients as would be theoretically expected.

not suggest that all places imposed a crime reduction effect. Instead, changing some properties had more of an impact than others.

With the exception of Gomez, all changed places produced individual statistically significant declines in crime. And while the estimate for Gomez was not statistically significant, it was still negative. However, once variables were analyzed together to control for each other's effects, some changes in the models occurred. While the removal of nearly all hotspots still indicated declines in crime, some became no longer statistically significant. Moreover, the estimate for the St. James Cut became non-significant and positive, albeit relatively small.

There is a plausible explanation for why the St. James Cut variable yielded a positive result. For many years, the St. James Cut was used as passage from Curtis Street to East McMillan Street for drug dealing. This alley was located immediately across the street from Kroger and next to a bus stop. The easy access and frequent traffic made it a prime location for loitering and oftentimes various crimes. This property had been of interest to the WHRF because it was a problem place in the neighborhood. However, recall that redevelopment in Walnut Hills only began in 2013 and ownership of the St. James Cut changed the following year. Moreover, Wright indicated that when the WHRF obtained the property they were still in the process of building their organization and acquiring money to make substantial changes in the neighborhood. Until their could acquire more funds, he recounted that they decided to initially install large planter boxes with flowers in the alley to signal to offenders that the property was being taken over by capable guardians. Wright said this created a backfire effect and the drug dealing actually worsened. Specifically, the planter boxes became places where offenders could store their drugs. Not only did this allow them to store more drugs, but it also decreased the amount of time offenders were in direct possession of them. Thus, if the police stopped them,

they often did not have the illegal goods on their person (K. Wright, personal communication; see also Linning & Eck, 2018).

Once the WHRF realized they had made it easier for offenders to commit their crimes, they removed the planter boxes and replaced them with picnic tables with chess boards (figure 7.3 & 7.4). Once again, these were meant to serve as a place holder until further redevelopment could be funded. As of spring 2019, the St. James Cut is currently fenced off and under construction (figure 7.5). Thus, it is highly unlikely that any crimes are occurring at this location. While conducting field observations I have also noticed that people no longer loiter at this location. Although the bus stop still remains, people cannot access the St. Jams Cut and the Kroger across the street has since shut down (as of April 2018, see WCPO, 2016). Thus, this location no longer appears to be a popular "hang out" place. Because the study period of this study ends in December 2016, I do not have enough data to assess the likely true effects of change at the St. James Cut. As mentioned, ownership changed in August 2014 and construction of the property did not begin until August 2018. Once crime data are available through to completion of this site, a crime reduction effect may very well be observed.

Figure 7.3. St. James Cut circa June 2012. Photo Credit: Google Street View

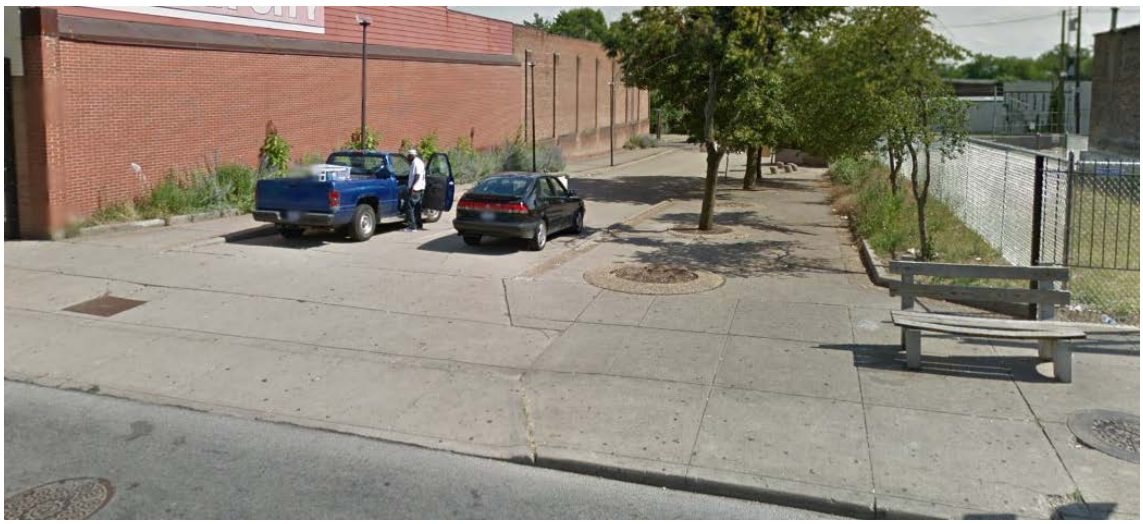


Figure 7.4. St. James Cut circa October 2016. Photo Credit: Google Street View

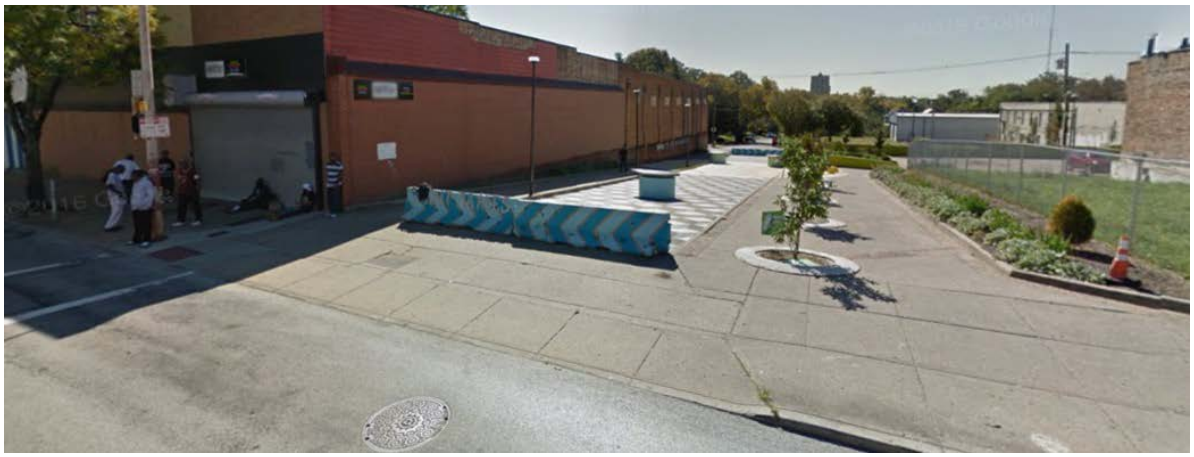


Figure 7.5. St. James Cut circa September 2018. Photo Credit: Shannon Linning

Results from the "added places" model were initially surprising (Table 7.5). Once combined in the same model, many variables were no longer statistically significant. Moreover, all but Fireside Pizza and the Trevarren/Hauck/Dominig building generated positive estimates. Most of these positive effects were small, but the estimate for Gomez was more substantial. However, this result could plausibly be attributed to a right censoring issue. Once again, the

study period lasted until December 2016, yet Gomez only became active in May of that same year. This leaves only 8 post-intervention observations from which to make an assessment. If a temporary anomalous trend occurred during this time period, it could make it look like the addition of the Gomez restaurant increased crime. Though this is possible, it is unlikely and I suspect that an opposite trend would be observed had I had access to data for 2017 onward.

Results from the "places added" model are certainly mixed. However, the additional tests of the aggregate redevelopment variable shed some light on what may be happening in the neighborhood. While the individual impact of specific added places may not be very large, it is possible that together, they have a crime reduction effect. This is supported by results in table 7.6. When I created a single variable to represent the collective effect of redevelopment in Walnut Hills, the model indicated that there was a statistically significant reduction in crime. However, I also tested this variable with another to represent when the first hotspot in the neighborhood was removed. In that model both variables were statistically significant and negative. However, the estimate for the aggregate redevelopment declined and was smaller than the estimate for the hotspot removal. This suggests two things. First, there is an aggregate crime reduction effect that the redevelopment brought about independent of the hotspots being removed. Second, the impact of this redevelopment is not as strong as the impact of removing hotspots.

Combined, these findings suggest a meaningful idea. Perhaps the addition of well-managed places do not have an immense crime reduction effect in and of themselves. Instead, that is left to the removal of crime hotspots. However, the added places still serve a fundamental function. Once the hotspots are removed, the addition of places with responsible place managers

sustains that crime reduction effect. Adding these places did not decrease crime much more, but they prevented the hotspots from re-emerging.

Figure 7.6. Red Point Market circa August 2011. Photo Credit: Google Street View

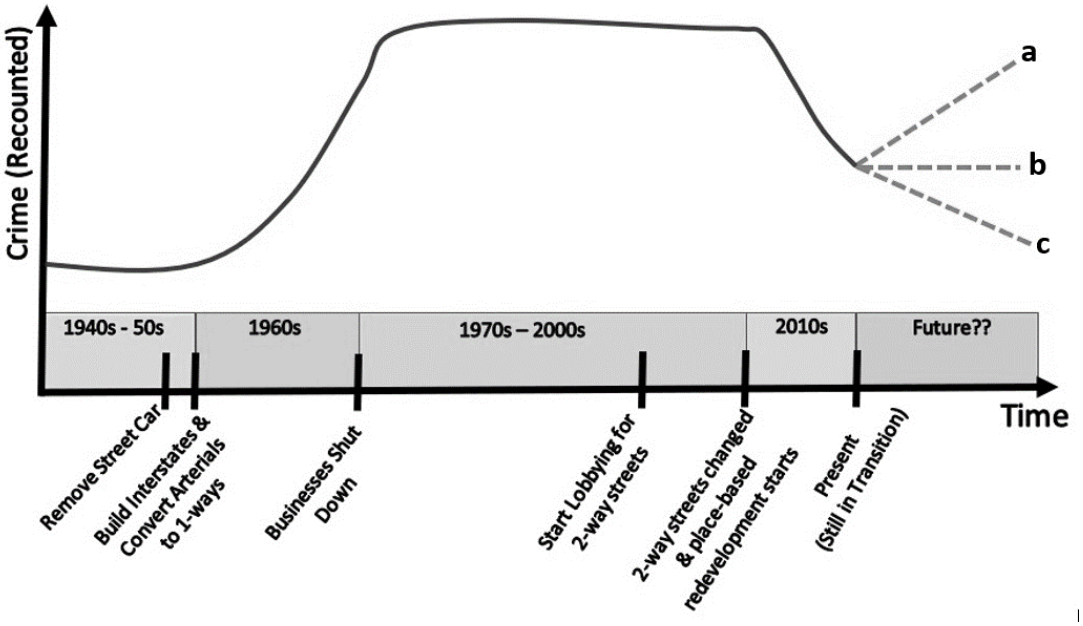
Returning to the Red Point Market example, little to no crime occurs here anymore. In fact, there were one (a theft), zero, and one (a theft) crimes at that address from 2014, 2015, and 2016 respectively. While conducting my field observations, I did not see any individuals loitering outside of that building. As previously mentioned, many offenders stood outside of the Market to sell drugs. In fact, GoogleMap streetview captures of this location show several people standing outside of the building (Figure 7.6). I have taken photos of the location following its repossession and once construction began in August 2018 (Figure 7.7). Change at this location is a prime example of the fact that the building did not even have to be actively in use to sustain the crime reduction effect of shutting down the business that was enabling crime. Perhaps once a new business opens in its place an additional crime reduction effect will be observed.

Figure 7.7. Red Point Market circa March 2017. Photo Credit: Shannon Linning

Having said this, sustaining the crime reduction effect is still somewhat speculative. The empirical results point to this conclusion, but analysis of future data would be needed to know for sure, particularly as further development is completed in the neighborhood. Returning to the recounted crime trend found in chapter 6, there are three general trends that would emerge from a follow up study. Either crime will begin rising again (a), it will remain relatively stable to where it was in 2016 at the end of the study period (b), or it will decline (c) (figure 7.8). I suspect a substantial rise in crime will be unlikely. The question will be whether the second or third outcomes occur. Results from this study suggest that the crime trend recounted by participants in chapter 6 is plausible. Overall, there appears to be evidence that the removal of crime hotspots has reduced neighborhood crime, and the addition of well-managed places has a crime

prevention effect independent of hotspot removal efforts. Combining these approaches will likely yield the most promising and long-term effects.

Figure 7.8. Possible future crime trends in Walnut Hills, Cincinnati, Ohio



CHAPTER VIII.
STUDY 3: THE IMPACT OF PLACE MANAGEMENT ACROSS NEIGHBORHOODS

> "*Why do planners fix on the block and ignore the street? The answer lies in a shortcut in their analytical techniques. After planners have mapped building conditions, uses, vacancies, and assessed valuations, block by block, they combine the data for each block, because this is the simplest way to summarize it, and characterize the block by appropriate legends. No matter how individual the street, the data for each side of the street in each block is combined with data for the other three sides of its block. The street is statistically sunk without a trace. The planner has a graphic picture of downtown that tells him little of significance and much that is misleading*" (Jacobs, 1958, pp. 92-3).

Results from chapters 6 and 7 provide support for Jacobs' (1961) and Snodgrass' (1976) ideas regarding the influence of outward (i.e., political, economic, and historical) factors on neighborhood crime. These ideas align with much of the environmental criminology approach to explaining crime. For instance, the management of property can influence whether a place becomes a crime hotspot (Eck, 1994; Eck & Madensen, 2018). That said, the presence of these outward factors does not disprove the influence of inward (i.e., social and structural) factors that are theorized in the ecological approach (Shaw & McKay, 1942; Sampson et al., 1997; Wilcox et al., 2018).

In this chapter, I examine the extent to which two separate crime generating processes contribute to neighborhood crime: neighborhood and place effects. There may certainly be more, but to keep things simple, I argue these are the two major processes to be considered. Traditionally, criminologists have used different approaches to studying neighborhood crime and crime at places. In the former, structural variables are regressed on neighborhood crime to assess variation across units (e.g., Chamberlain & Hipp, 2015; Sampson & Groves, 1989). In the latter, researchers have largely focused on the prevalence of micro-spatial crime concentration and its causes (e.g., Andresen et al., 2017; Braga et al., 2010; Eck & Wilcox, 2011; Weisburd, 2015).

Most studies use one of these two approaches in isolation. In the ecologically-based work, neighborhood crime is the product of poor structural factors. On the other side, some of the place-based research has suggested that certain neighborhood has more crime simply because they have "more high crime locations than others" (Eck, 2018b, p. 190).

Some recent work has tried to link these approaches together through the use of techniques such as multilevel modeling. These studies argue that offenders first select a neighborhood, then a specific target within it (Wilcox & Tillyer, 2018). This assumes a top-down framework whereby neighborhood-level functions give rise to high crime places. However, this approach assumes that crime is the product of both neighborhood and place-based effects. Consequently, all crime data are used within the regression analyses.

Here, I propose an alternative way to test these processes. I start by making the assumption that there are at least two crime generating processes that contribute to neighborhood crime. For simplicity's sake, I will assume there are only two: neighborhood- and place-based processes. There certainly could be more, such as street segment effects. However, for this study, I will be testing for the possibility of two different effects. Also note, that I consider a place to be a specific piece of property with a single address. I attribute neighborhood effects to the typical structural effects that have been widely studied in the social disorganization literature. These include concentrated disadvantage, population mobility, and racial diversity. Conversely, the research on place-based effects suggest entirely different causal mechanisms. Crime is highly concentrated at specific places due to the creation of crime opportunities through poor place management. To illustrate the distinction between these two processes, take the following example.

Example: Jack Casino

In the late 2000s, the City of Cincinnati approved the installation of its first casino, specifically in the Pendleton neighborhood. The grand opening took place on March 4th, 2013 under the name Horseshoe Casino (later it became the Jack Casino on June 8th, 2016). Crime data from the Cincinnati Police Department indicated a surge in crime following the opening of this business. As seen in Table 8.1, there was little to no crime at this address in the years leading up to the casino opening. Then in 2013, crime surged from an average of 0.75 crimes per year to 67 offenses. Although crime declined thereafter, it still remained at extremely high levels exceeding 40 crimes per year. In fact, since 2013 this single location has consistently accounted for about one fifth or more of all crime in the neighborhood. The most common offenses that occurred here were theft and assault. It should also be noted that the data show that no crimes occurred at the address in January or February of 2013. Crimes began occurring there in March, the same month that the casino opened.

Table 8.1. Crime at 1000 Broadway St. and in Pendleton, Cincinnati, Ohio from 2009 to 2016

	2009	2010	2011	2012	2013	2014	2015	2016
# of crimes at 1000 Broadway St.	0	1	0	2	67*	50	44	47
# of crimes in Pendleton	271	280	205	182	247	233	236	245
% of crimes in Pendleton generated from 1000 Broadway St.	0.00	0.36	0.00	1.10	27.13	21.46	18.64	19.18

*No crimes were committed at 1000 Broadway St. in January or February of 2013

In this casino example, neighborhood explanations for crime at this address are highly improbable. It is not likely that levels of concentrated disadvantage or population mobility changed rapidly enough from February to March 2013 to explain this increase in crime. Instead, the opening of the casino created an opportunity for offenders. It likely became a crime generator

and attractor (Brantingham & Brantingham, 1995). Specifically, large numbers of people congregate at this casino to gamble thus creating opportunities for offenders to rob those who bring money with them to gamble or take their earnings after time spent there.

The Crime Generating Processes in Neighborhoods

Thus there are at least two ways that crime is generated within neighborhoods. Returning to my assumptions for this study, if there are two different theoretical explanations for the causal mechanisms of crime, there are three possible explanations for neighborhood crime. These include:

1. Resident-focused effects only: Crime in neighborhoods is only caused by structural, neighborhood-based effects.
2. Owner/manager-focused effects only: Crime in neighborhoods is only caused by place-based effects (e.g., high crime neighborhoods have more crime hotspots than low crime neighborhoods)
3. Both resident- and owner/manager-focused effects: There are both structural and place-based crime generating processes that are causing crime in neighborhoods.

In order to test these possible explanations, I argue that researchers need to disaggregate crime data. Again, studies of neighborhood crime typically aggregate all crimes within a geographic location—such as a neighborhood or census tract—and regress structural variables on crime across these macro-level units. However, I believe that at least some of the crime that is being captured in each of these units is not caused by resident-focused effects. Instead, they are occurring because of owner/manager-based ones. Thus, I argue that we should disaggregate our data prior to running our neighborhood regressions. This creates two testable assumptions:

1. Crime caused by resident-focused effects will be strongly explained by neighborhood structural variables.
2. If crimes at hotspots are caused by poor place management, then they should be weakly associated with neighborhood structural variables.

To test these assumptions, I propose the following procedure. First, I will regress the traditional structural variables on all crime data in the city using census tracts as my unit of analysis. This approach mirrors the typical steps carried out in macro-level studies of neighborhood crime (e.g., Chamberlain & Hipp, 2015). Second, I identify all crime hotspots in the city. These will be the addresses with disproportionately high crime. The definition of how many crimes constitute a hotspot may be debated, thus I will identify them using several definitions, namely places with 5, 4, 3, and 2 or more crimes in a year. I assume that places with 5 or more crimes per year are likely caused by owner/manager-focused effects, whereas places with one or two crimes per year are likely attributed to resident-focused effects. Once these addresses have been identified, I will select all crimes that occurred at them and remove them from the data. In other words, I am using a so-called 'hotspot filter' on the data. From this, I will have two datasets. One will consist only of hotspot crimes and the other of non-hotspot crimes. Then I will carry out two sets of analyses: a) regressing structural variables on the crime that does not contain hotspot crime, and b) regressing the structural variables on the hotspot only crime.

Given the abovementioned three explanations for neighborhood crime, three possible outcomes could occur. First, if there are only resident-focused effects contributing to neighborhood crime, then the removal of hotspot crimes will have little impact on the regression results. The results for both datasets should be very similar. As seen in figure 8.1 and table 8.2, the most noticeable difference would be the reduction in crime incidents being examined. This is simply the product of the hotspot crime removal process. However, the regression results should be minimally impacted compared to the results using all crimes. The R-Squared values would remain relatively stable as the structural variables explain approximately the same amount of

variance in both groups of data. The standard error of the estimate would also remain relatively consistent in that we would not expect the average distance of points to vary from the regression line very much. Lastly, the regression coefficients would also remain about the same. The magnitude and direction of beta values as well as their statistical significance should be about the same if there is only a single neighborhood-based set of causal mechanisms explaining crime across units.

Figure 8.1. Resident-Focused Effects Only, Before and After Hotspot Crime Removal

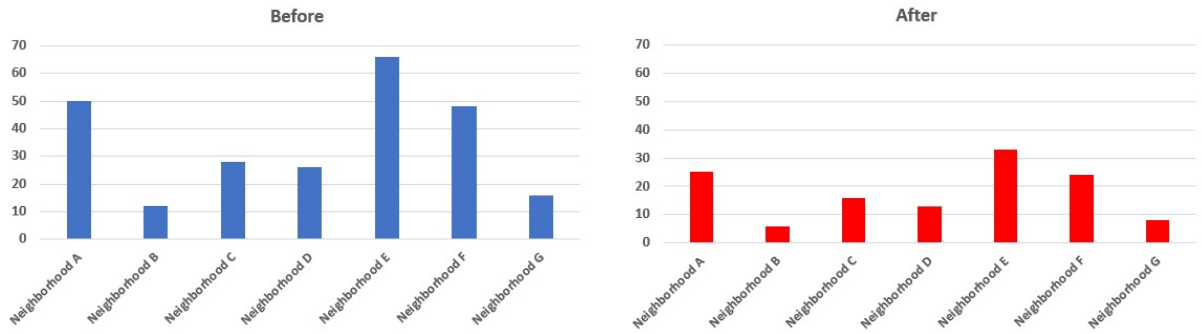


Table 8.2. Resident-Focused Effects Only, Removal Models and Hotspot Crime Only Model

	Removal Models	Hotspot Only Models
R-Squared	≈	≈
Standard Error of the Estimate	≈	≈
Regression Coefficients	≈	≈

In the second owner/manager-only effect explanation, a different result should emerge. Recall, this explanation assumes that structural effects do not cause crime. Instead, high crime neighborhoods exist simply because they contain more crime hotspots than low crime neighborhoods. In this scenario, the removal of crime hotspots should theoretically remove most of the variation in neighborhood crime (see figure 8.2 and table 8.3). In the regression models,

the R-Squared and standard error of the estimate would decline substantially in the hotspot only models. Because owner/manager-focused effects are generating crime, the structural variables do a poor job of explaining the variation in neighborhood crime. Specifically, the magnitude and statistical significance of the structural variables would likely be weaker than when all crimes are used.

Figure 8.2. Owner/Manager Effects Only, Before and After Hotspot Crime Removal

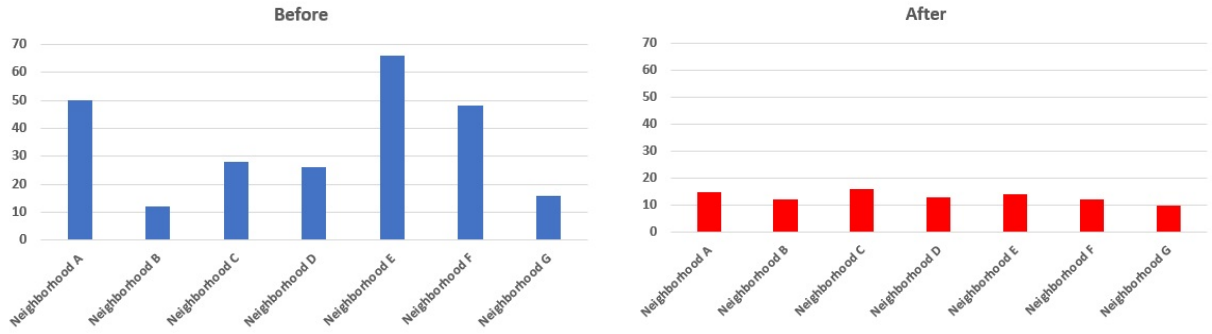


Table 8.3. Owner/Manager Effects Only, Removal and Hotspot Crime Only Models

	Removal Models	Hotspot Only Models
R-Squared	?	Decrease
Standard Error of the Estimate	?	Decrease
Regression Coefficients	?	Decrease

Lastly, a combination of the previous two extreme outcomes could emerge. In this scenario, both resident- and owner/manager-focused effects contribute to crime in neighborhoods. After removing hotspot crimes, variation in neighborhood crime would still exist (see figure 8.3). Then the regression models absent hotspot crimes would improve (see table 8.4). Specifically, the R-Squared values would increase and the standard error of the estimate would decrease suggesting better model fit because the average distance between the data points and the

regression line has declined. The magnitude and statistical significance of the regression coefficients would also increase. Conversely, the regression models using hotspot only crime would show poor model fit. The R-Squared values would be low and the standard error of the estimate would increase. Moreover, the regression coefficients would show that there is little to no association with structural variables and crime at hotspots.

Figure 8.3. Resident & Owner/Manager Effects, Before and After Hotspot Crime Removal

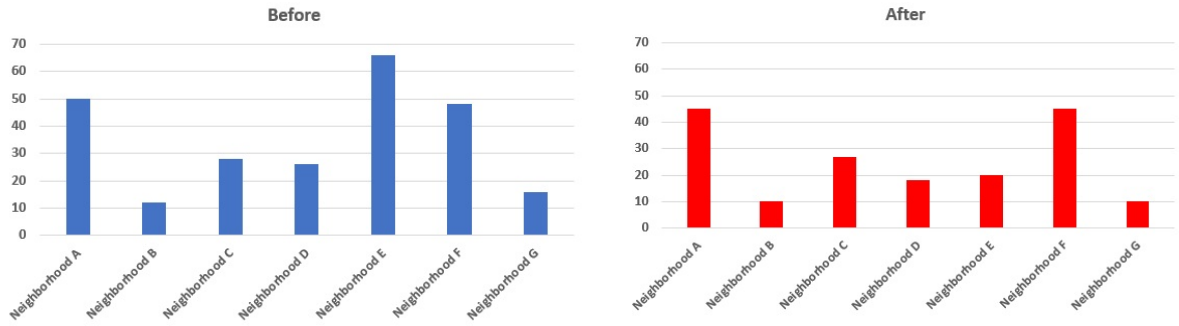


Table 8.4. Resident & Owner/Manager Effects, Removal and Hotspot Crime Only Models

	Removal Models	Hotspot Only Models
R-Squared	Increase	Decrease
Standard Error of the Estimate	Decrease	Increase
Regression Coefficients	Increase	Decrease

Given the current literature, there is strong evidence that both resident- and owner/manager-focused effects contribute to neighborhood crime. Thus, the results will likely show support for the third outcome whereby the hotspot crime removal models improve and the hotspot crime only models are poorly predicted by structural variables. Such outcomes would have important implications for future empirical studies of neighborhood crime both theoretically and methodologically.

Methods

The Cincinnati Police Department provided crime data for 2010 through their computer aided dispatch (CAD) system. Each case in the data represents one crime event. The data contain the date, time, and addresses for which each event occurred. Each case was then geocoded using ArcMap 10.3 to the corresponding address in the city of Cincinnati. Geographic data for the city were obtained through the Cincinnati Area Geographic Information System (CAGIS) website and the Hamilton County Auditor's Office. These data contain the geographic coordinates of all addresses and land parcels in the city. They also provided files to represent the municipal and neighborhood boundaries within the city as well as the streets. According to the CAGIS data, there are 124,121 addresses within the city of Cincinnati. Lastly, independent variables were created from U.S. census data from 2010.

In 2010, there were 38,395 crimes reported to the Cincinnati Police Department. These include incidents varying from assault to burglary, telephone harassment and theft of license plates. For the purposes of this study, not all types of events were examined. Specifically, focus was on common violent and property offenses. Property crime included: burglary, aggravated burglary (including those using a weapon or ordnance), breaking and entering, grand theft, petit theft, theft, unauthorized use of a motor vehicle, and vehicle theft. Violent crime included: aggravated robbery (including armed, deadly weapon and inflicting/attempting serious harm), aggravated assault (including those with a weapon or ordnance), murder, aggravated murder, assault (including knowingly or recklessly harming the victim), felonious assault (including those with a weapon or ordnance and where the victim was seriously harmed), negligent assault, and robbery.

Crime events were geocoded to the corresponding addresses found in the CAGIS data using ArcMap 10.3. I created new shapefiles including only the incidents that met the above-

mentioned definitions of property and violent crimes. This process yielded samples of 20,203 property and 7,084 violent incidents. Using ArcMap 10.3 I conducted a frequency analysis to identify how often addresses within the city experienced a call for a property offense. I then sorted the output table in descending order from places with the most to the least crime. This process was repeated using the violent crime data.

Table 8.5. Place characteristics of crime hotspots, Cincinnati, OH, 2010

Crime Type	Hotspot Definition (# crimes/place)	# of places crime is removed from (%)	# of crimes removed (%)
Property	5+	325 (0.26)	3692 (18.27)
Property	4+	541 (0.44)	4544 (22.49)
Property	3+	1123 (0.90)	6263 (31.00)
Property	2+	2852 (2.30)	9709 (48.06)
Violent	5+	98 (0.00)	741 (10.46)
Violent	4+	181 (0.15)	1073 (15.15)
Violent	3+	333 (0.27)	1529 (21.58)
Violent	2+	919 (0.74)	2691 (37.99)

I assessed the amount of crime contained within the most prolific crime places in the city using varying definitions of a hotspot (see table 8.5). First, I selected all places with 5 or more property crimes in 2010. In the case of property crime, only 325 addresses experienced five or more property incidents. These places represent 0.26% of all addresses in the city. Moreover, this small portion of places accounts for 18.27% of property crimes reported that year. Not surprisingly, more places are crimes are captured in this filtering process if the definition of a hotspot weakens to 4 or more (0.44% of places account for 22.49% of the property crimes), 3 or more (0.90% of addresses experienced 31% of property crimes), or 2 or more (2.30% of places generated 48.06% of property crimes) crimes. These findings align with Sherman et al.'s (1989) original crime and place study that "just over half (50.4%) of all calls to the police…went to a

mere 3.3% of all addresses and intersections" (p. 37), and subsequent replications (e.g., Andresen & Malleson, 2011; Braga, Papachristos, & Hureau, 2014; Curman, Andresen, & Brantingham, 2014; Weisburd, 2015; Weisburd, Bushway, Lum, & Yang, 2004; Weisburd, Groff, & Yang, 2012).

I repeated the above assessment for all calls regarding violent offenses. In this case, only 98 addresses (0.00079%) of places in the city experienced 5 or more violent crimes. Moreover, this small percentage of places experienced 10.46% of all violent crimes in 2010. Similar to property crime, as the number of violent crimes per hot spot declined, more places and crime was identified. Specifically, 0.15% of places experienced 4 or more incidents accounting for 15.15% of violent crime in the city. Only 0.27% of places had 3 or more incidents which contained 21.58% of violent crime calls. Lastly, 0.74% of addresses had 2 or more incidents and accounted for 37.99% of all violent crimes.

The next step was to determine how crime was distributed across neighborhoods in the city. According to the US Census, there are 52 neighborhoods in Cincinnati. However, the CAGIS files combined two of those neighborhoods. For example, instead of having North Avondale and Paddock Hills as separate neighborhoods, they were combined into the same polygon. As such, 50 distinct neighborhoods are considered in this study. Using the abovementioned crime data, I determined the amount of crime contained within each neighborhood. Crimes were not distributed evenly across neighborhoods regardless of the crime type examined (see appendix G & H). This unequal distribution also applies even when standardizing calls by the number of places or population of each neighborhood.

Figures 8.4, 8.5, 8.8, and 8.9 show the distribution of property and violent crime across neighborhoods, as well as their relative distributions when crimes from hotspots are removed.[14] Several trends should be noted from these figures. First, even when crime from the worst hotspots is removed from the data, there is still a variation in crime across neighborhoods. However, the variation declines after this removal process. For example, in figure 8.4, Westwood has the most property crime followed by West Price Hill and East Price Hill. Following the removal process, these neighborhoods still possess the most crime relative to other neighborhoods, just to a lesser degree (figure 8.5). However, this trend does not persist when assessing violent crime (figures 8.8 and 8.9). Although Over-the-Rhine, East Price Hill, and Avondale contain the most violent crime, their rankings shift when hotspot crimes are removed. After carrying out this process, East Price Hill contains the most violent crime followed by Over-the-Rhine, and Westwood.

Because neighborhoods vary in terms of geographic size and population, I also examined neighborhood crime after standardizing for the number of places within the neighborhoods. As figures 8.6, 8.7, 8.10, and 8.11 show, this changes the ranking of highest to lowest crime neighborhoods. In this instance, Downtown, Queensgate, and Corryville contain the most property crime. Moreover, once I remove crime from hotspots with 5 or more crimes, the relative ranking of these neighborhoods changes. Queensgate becomes the highest crime neighborhood followed by Downtown and Corryville. When I repeat this for violent crime, Over-the-Rhine and Pendleton contain the most crime even after the removal process. However, the subsequent neighborhoods shift in the rankings. Using all crime, Corryville and Millvale contain the third

[14] Note: The bar charts discussed in this chapter show changes in crime variation across neighborhoods when crimes from hotspots with 5 or more crimes per place are removed. I also repeated this process with a more relaxed definition of a hotspot (i.e., 4 or more crimes, 3 or more crimes, and 2 or more crimes). These charts can be found in Appendix I.

and fourth most crime in the city. However, after removing hotspot crimes, Downtown and Villages at Roll Hill occupy those respective rankings.

Figure 8.4. Property crime per neighborhood, Cincinnati, OH, 2010

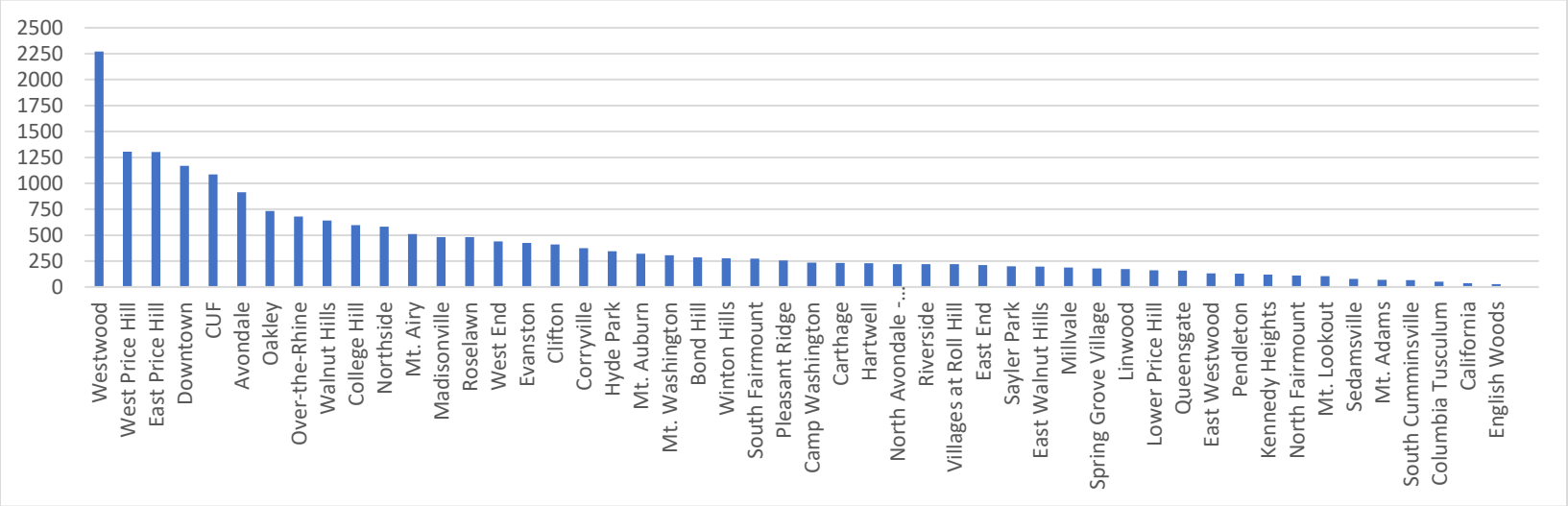


Figure 8.5. Property crime per neighborhood absent crime from hotspots with 5 or more crimes, Cincinnati, OH, 2010

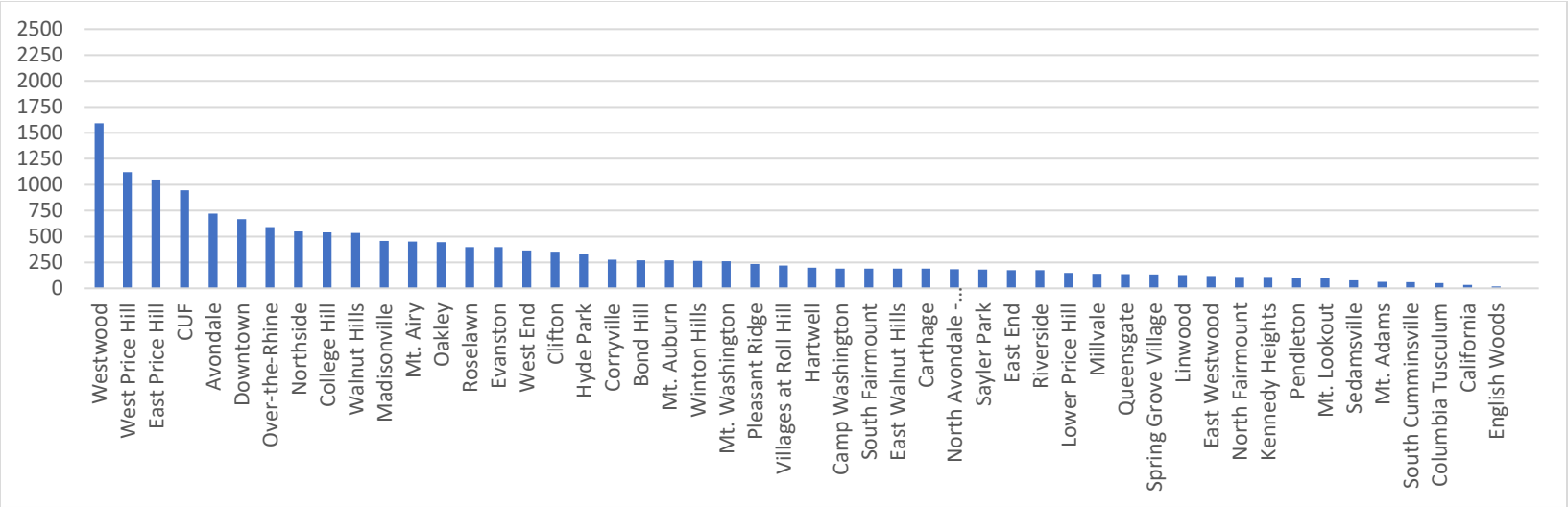


Figure 8.6. Property crime per neighborhood standardized per 100 places, Cincinnati, OH, 2010

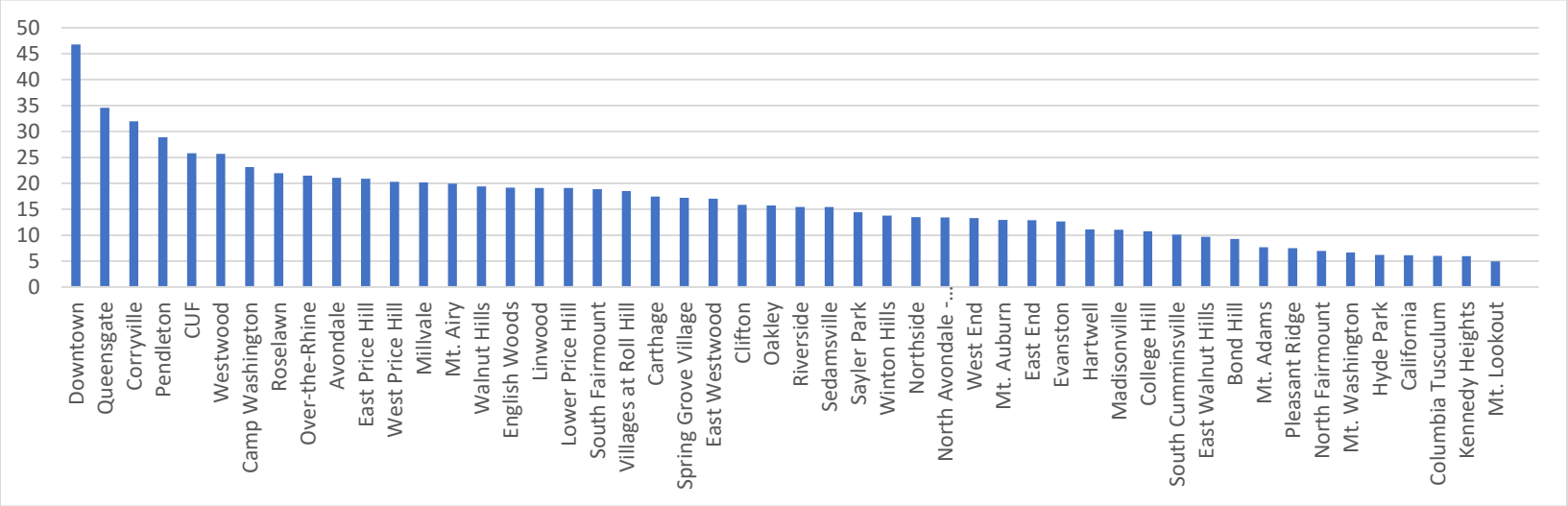


Figure 8.7. Property crime per neighborhood absent crime from hotspots with 5 or more crimes standardized per 100 places, Cincinnati, OH, 2010

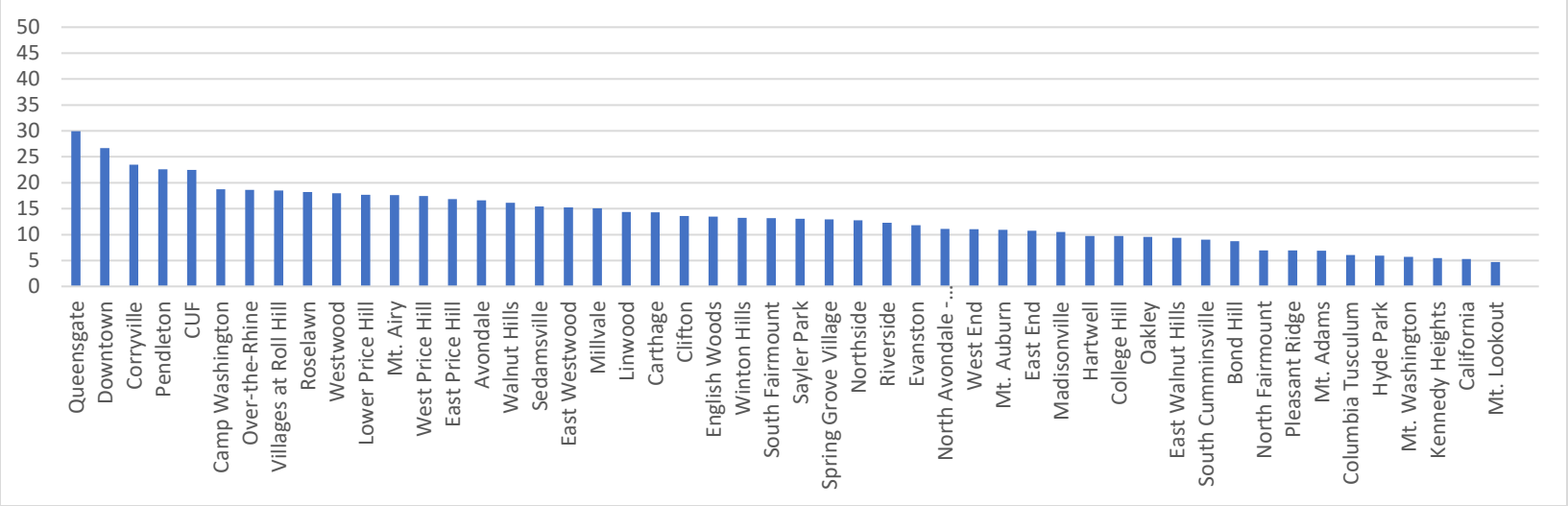


Figure 8.8. Violent crime per neighborhood, Cincinnati, OH, 2010

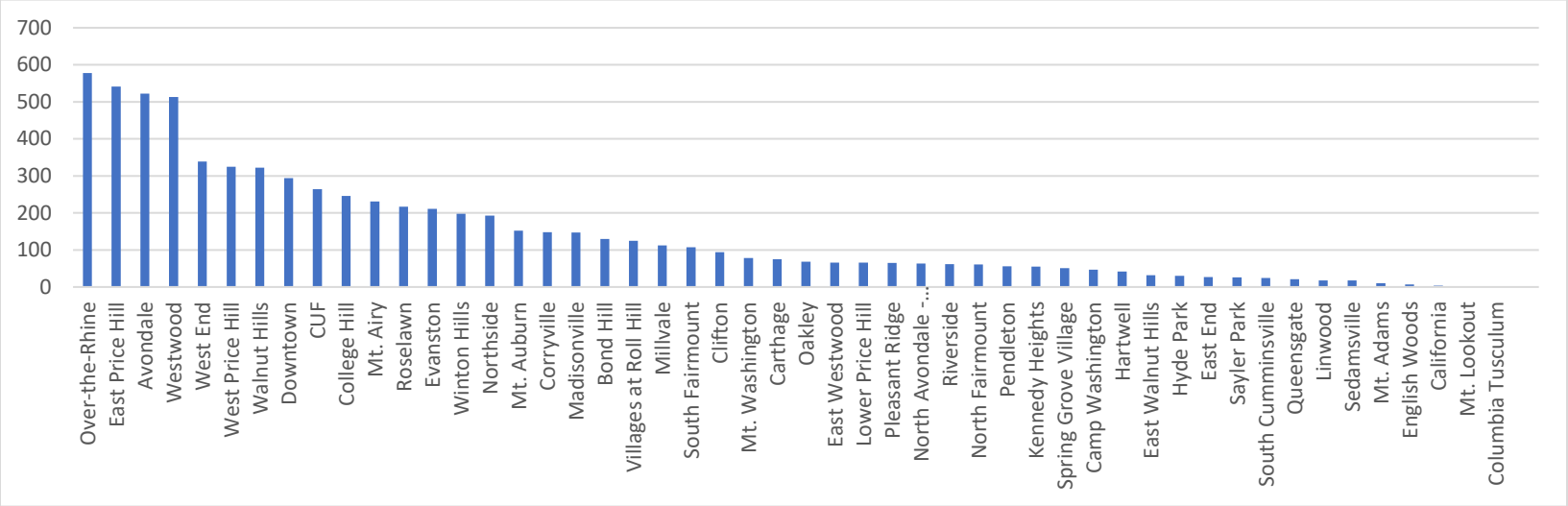


Figure 8.9. Violent crime per neighborhood absent crime from hotspots with 5 or more crimes, Cincinnati, OH, 2010

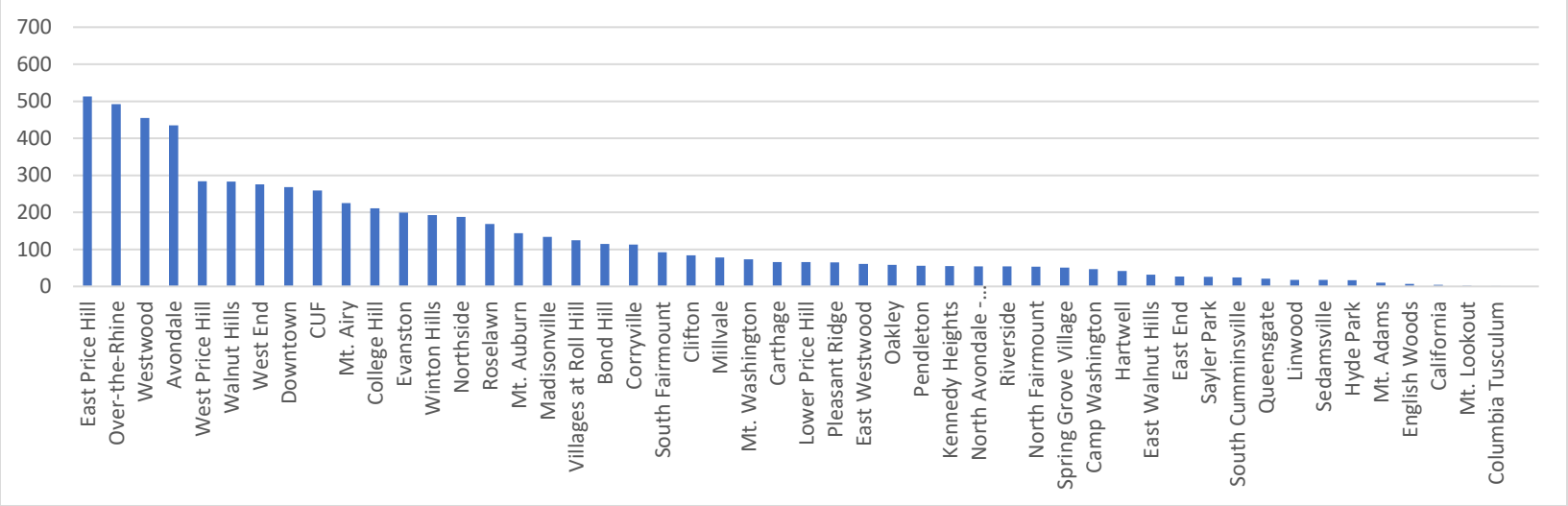


Figure 8.10. Violent crime per neighborhood standardized per 100 places, Cincinnati, OH, 2010

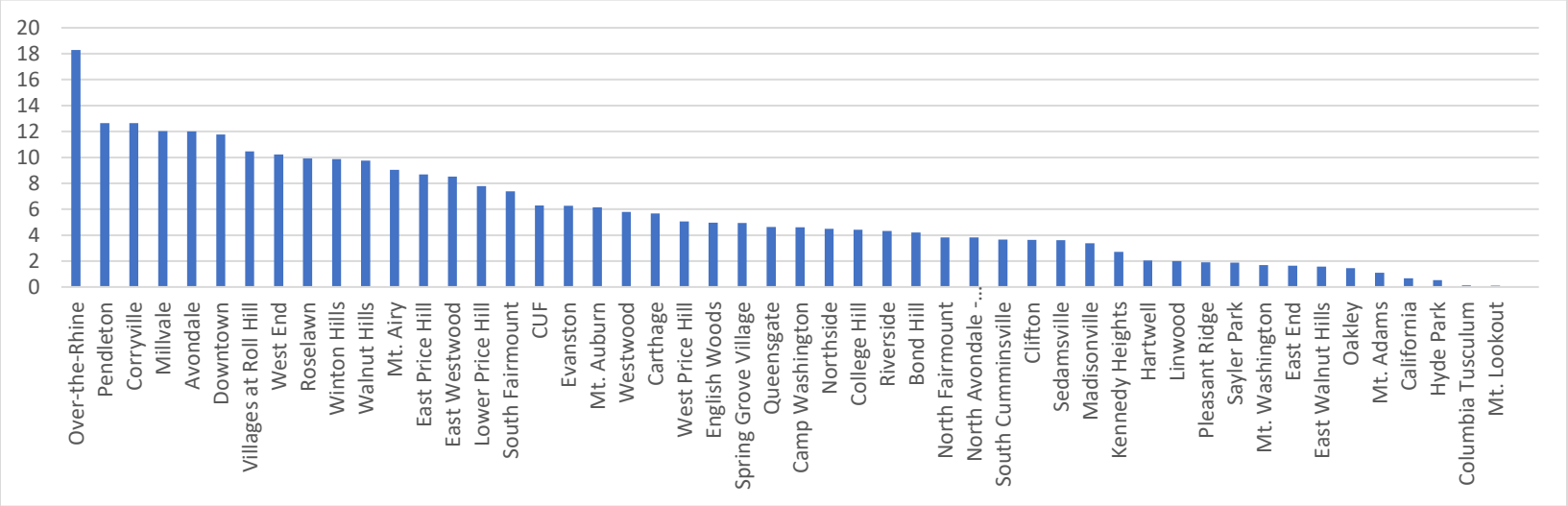
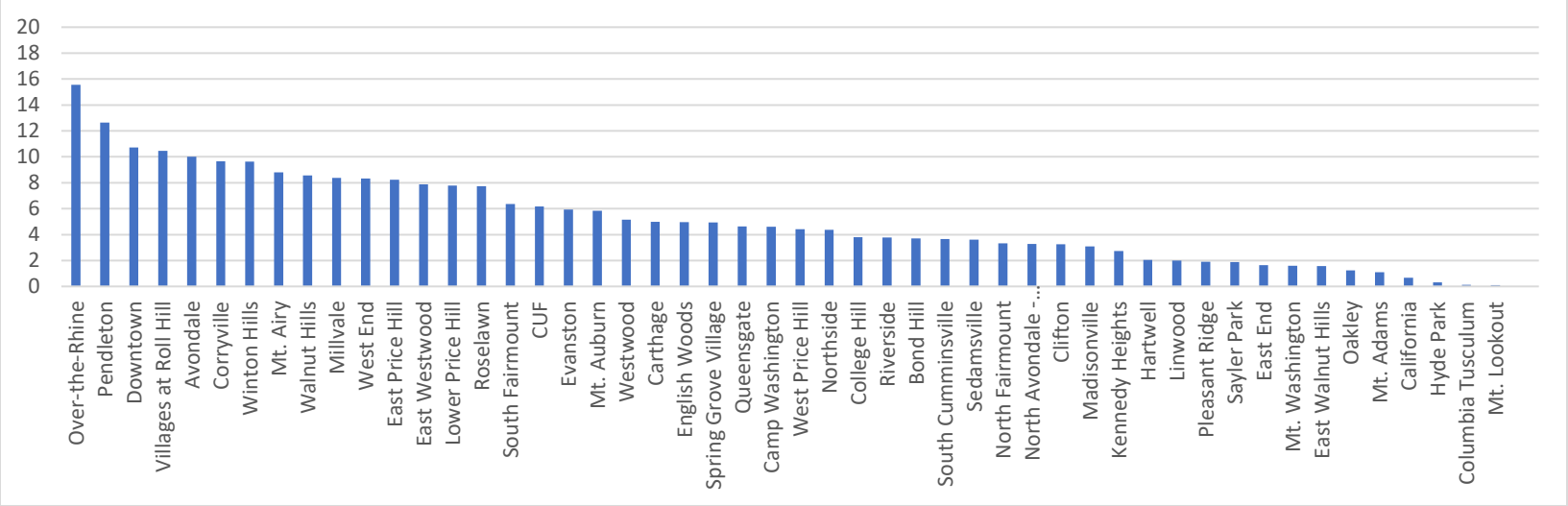


Figure 8.11. Violent crime per neighborhood absent crime from hotspots with 5 or more crimes standardized per 100 places, Cincinnati, OH, 2010



Dependent variables. As discussed above, the crime data were grouped into property and violent crimes. For the regression analyses, I generated a series of models using variations of the dependent variables. The initial models use all of the property and violent crime data. Then I computed several models where the dependent variable consisted of all crime minus the hotspot crimes. I tested varying definitions of a hotspot as a sensitivity check. After running these models, I computed others using the hotspot crime only data. As seen in table 8.6, the mean number of crimes per census tract declines as hotspot crimes are removed. However, the number of units of analysis (i.e., census tracts) do not change with this removal process. Only the number of crimes counted within each of the 110 geographic units changes.

Table 8.6. Descriptive statistics, dependent variables

Variables	Mean	S.D.	Min.	Max.	N
All Property Crime	182.40	109.52	36	701	20,063
5 or more removed	147.99	73.18	11	383	16,279
4 or more removed	141.45	67.69	32	363	15,559
3 or more removed	125.85	59.39	29	303	13,843
2 or more removed	94.77	43.54	25	227	10,425
5 or more only	34.40	53.90	0	318	3,784
4 or more only	40.95	57.51	0	338	4,504
3 or more only	56.55	65.71	3	398	6,220
2 or more only	87.62	78.27	3	474	9,638
All Violent Crime	64.10	48.99	0	210	7,052
5 or more removed	57.37	42.91	0	193	6,311
4 or more removed	54.39	40.02	0	189	5,983
3 or more removed	50.25	36.30	0	180	5,527
2 or more removed	39.72	28.39	0	152	4,369
5 or more only	6.74	9.75	0	40	741
4 or more only	9.72	12.54	0	56	1,069
3 or more only	13.86	16.32	0	79	1,525
2 or more only	24.39	24.03	0	113	2,683

# of census tracts: 110; # of places in Cincinnati: 124,121

Independent variables. Unfortunately, data for structural variables were not available at the neighborhood level. The most accurate information pertaining to such variables were obtained from the 2010 United States Census. However, these data are attributed to the census tract level. Often times, neighborhoods are bigger geographic areas than census tracts and thus capture several census tracts at once, but not necessarily all of the tract. Thus, because the spatially located crime data can be aggregated to any geographic unit, they were aggregated by census tract to create a corresponding crime count per spatial unit. Census tracts have often been used as proxies for neighborhoods in much of the social disorganization research (Wilcox et al., 2018).

Predictor variables were created from data in the 2010 U.S. Census. Consistent with much of the community criminology research (Chamberlain & Hipp, 2015; Warner & Pierce, 1993), three constructs were tested: racial diversity, concentrated disadvantage, and residential mobility. These three constructs have evolved over decades of neighborhood-crime research to represent much of Shaw and McKay's (1942) original explanations of social disorganization. Concentrated disadvantage has been used to capture various effects associated with poverty and relative deprivation (Krivo & Peterson, 1996; Wilson, 1987). Racial diversity represents the degree of racial/ethnic heterogeneity in persons within each neighborhood (Chamberlain & Hipp, 2015; Laurence, 2009). Residential mobility indicates the prevalence of individuals who do not stay in the neighborhood, thus reducing the likelihood that they become invested within the community (Elliott et al., 1996; Laurence, 2009).

Table 8.7. Descriptive statistics, independent variables.

Variables	Mean	S.D.	Min.	Max.	Factor Loading
Racial Diversity	0.38	0.16	0.07	0.64	n/a
Concentrated Disadvantage					
1 % poverty	23.82	18.99	0	94.1	0.890
2 % female headed household	20.24	11.94	1.1	70	0.872
3 unemployment rate	12.26	8.60	1.0	47.4	0.889
4 median household income	35,464.30	20,724.48	7,328	130341	0.808
Residential Mobility	74.66	12.29	28.86	97.99	n/a
Total Population	2,771.51	1,357.44	812	6,278	n/a

census tracts (unit of analysis) = 110

I generated a *racial diversity* using the Simpson Index of Diversity (Simpson, 1949). The variable ranges between 0 (no racial diversity) and 1 (total racial diversity), amongst five racial groups recorded in the census (Whites, African Americans, Latinos, Asians, and Others). The index was calculated using the following formula:

$$D = 1 - \frac{\sum n(n-1)}{N(N-1)}$$

Where n = number of individuals of each race, and N = total number of individuals of all races. As see in table 8.7, no census tract lacks diversity nor possesses total diversity (minimum = 0.07; maximum = 0.64), and there is a mean diversity value of 0.38 in these data.

In accordance with the community criminology literature, I also created a measure of *concentrated disadvantage*. This construct was created from four census indicators: (a) the percentage of persons living below the poverty level, (b) the percentage of female headed households, (c) unemployment rate of persons 16 years and older, and (d) median household income. As seen in table 8.7, poverty levels across census tracts ranged between a minimum of 0 and maximum of 94.1%. The percentage of female headed households is slightly less extreme

with an average of 20.24% and a range between 1.1 and 70.0%. The average unemployment rate across census tracts is 12.28 and the median household income is $35,464.

A factor analysis using a varimax rotation was applied for data reduction across these four items and generated a one factor solution. As table 8.7 shows, all of the factor loadings ranged from 0.872 to 0.890 and the analysis indicated that 74.86% of the variance was explained by the analysis. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.828 thus exceeding the suggested threshold value of 0.6 (see Kaiser, 1974) indicating that the one factor solution is a good fit for the data. Moreover, Bartlett's Test of Sphericity ($\chi^2 = 244.157$) was significant at the 0.05 level also indicating a good fit for the data.

I measured r*esidential mobility* using the census variable for percentage of persons living in the same house one year ago. On average, three quarters of residents were living in the same census tract the year before. However, some spatial units had mobility as low as 28.86% (table 8.7). Lastly, a *total population* variable was used to control for the number of residents living in each census tract. This variable ranged from 812 to 6,278 persons with an average of 2,771 persons per census tract.

Analysis

As previously mentioned, I proposed a multi-step process to test the assumption that two crime generating processes contribute to neighborhood crime. The first set of analyses used all property and violent crime data obtained from the Cincinnati Police Department. This meant an analysis of all 20,063 property crimes that occurred in 2010 and a separate model using all 7,052 violent crimes (Table 8.5). Next I identified all addresses that had five or more crimes take place in that year. I then removed all crimes at these locations from the dataset. I re-ran the regression models using crime absent the hotspot crimes. In the case of property crime, this meant an analysis of 16,371 events (i.e., the initial 20,063 property crimes minus the 3,692 events that

occurred at the identified hotspots). Similarly, I calculated a separate model using the remaining 6,311 violent crimes (i.e., the initial 7,052 violent crimes minus the 741 crimes that occurred at the identified hotspots). I repeated this process using different definitions of a crime hotspot: places with four, three, and two or more crimes per place to test the sensitivity of the data. To be clear, although the number of crimes tested were reduced in the model, the number of census tracts remained the same throughout the models. That is, only the number of crimes counted within each unit of analysis was reduced for these subsequent models. Finally, I generated a series of regression models using the hotspot crime only data. For example, a separate model using only the 3,692 property crimes that were identified at hotspots was tested. Another model used only the 741 violent crimes. These final set of analyses were used to test the assumption that structural variables should be poor predictors of hotspot-only crime.

Lastly, many studies of neighborhood crime use ordinary and weighted least squares (OLS & WLS) regression to test the effect of structural variables on crime. More recently, studies have pointed out that regression analyses that do not account for spatial autocorrelation violate the OLS assumption of independent errors (Andresen, 2006; Smith, Frazee, & Davison, 2000). This can lead to biased beta values. In practice, values in one geographic unit may be impacted by neighboring ones leading to spatial dependence. Thus, analyses modeling macro-level spatial crime trends should account for spatial autocorrelation using spatial regression models. Here, I used spatial error models in place of OLS models.[15] The functional form of the spatial error model is:

$$Y = X_\beta + \rho \ \sum_{j=1}^{n} Wij\varepsilon j \ + \ u$$

[15] Note: I did run OLS regressions for each of the spatial error models below (see Appendices J and K). Overall, the results were not largely different. The predicted direction of relationships remained the same and the magnitude of these variables were similar. On average the R^2 values were slightly smaller in the OLS models. All F-statistic estimates were statistically significant across the 18 models.

"where Y is the crime measure, X_β is a matrix of independent variables and corresponding parameters, W_{ij} is a measure of spatial association between location i and j, ρ is a measure of the strength of that spatial association and u is the remaining independent and identically distributed error" (Andresen, 2006, p. 494). Spatial autocorrelation was addressed using a first- and second-order Queen's Contiguity weights matrix whereby any units of analysis (i.e., census tracts) that are touching, even at a corner, are considered adjacent. Specifically, second-order queen's movement was used in the hotspot crime removal models (i.e., models 1 through 10). With the exception of the violent hotspot crime only model defined as two or more crimes per year (i.e., Model #18: which used second-order queen's movement), first-order queen's movement was used for the hotspot crime only models (i.e., models 11 through 17). The p-values for the Moran's I statistic were greater than 0.05. All regression models were estimated using GeoDa 1.12 software developed by Luc Anselin et al. (see: https://geodacenter.github.io/).

Results

To test the above hypotheses, I estimated 18 spatial error regression models using property and violent crime as the outcome variable (see tables 8.8 & 8.9). Models 1 and 6 show the regression results using all of the crime data. The pseudo-R^2 values are 0.382 and 0.505 for the property and violent crime models respectively. With the exception of racial diversity in the violent crime model, all structural variables were significant predictors of neighborhood crime. As crimes from hotspots were removed from the analyses several notable trends can be observed. First, regardless of the definition of a hotspot, the removal of hotspot crimes increases the pseudo-R^2 values across all models. For property crime, these values increase from the original 0.382 to values greater than 0.503. This trend is also seen in the violent crime models whereby the values increase from 0.505 to values as high as 0.600.

Table 8.8. Neighborhood models absent hotspot crimes, spatial error regressions, Cincinnati census tracts, 2010

Model	Crime Type	Hotspot defined as X+ crimes/year	Neighborhood model statistics							
			Pseudo-R^2	SE of Regression	Likelihood Ratio Test for Spatial Dependence (p)	Intercept (SE)	Total Population (SE)	Racial Diversity (SE)	Concentrated Disadvantage (SE)	Residential Mobility (SE)
1	Property	> max.	0.382	85.67	0.002 (0.97)	256.66*** (66.11)	0.03*** (0.006)	117.36* (53.52)	24.01** (8.47)	-2.79*** (0.72)
2	Property	5	0.526	50.16	0.008 (0.93)	186.52*** (38.75)	0.03*** (0.003)	57.72† (31.37)	25.73*** (4.96)	-1.84*** (0.42)
3	Property	4	0.532	46.07	0.001 (0.97)	171.50*** (35.49)	0.03*** (0.003)	58.65* (28.73)	24.20*** (4.54)	-1.67*** (0.38)
4	Property	3	0.540	40.08	0.36 (0.55)	142.95*** (30.46)	0.02*** (0.003)	56.39* (24.65)	22.25*** (3.89)	-1.38*** (0.33)
5	Property	2	0.503	30.57	0.44 (0.51)	99.85** (23.18)	0.02*** (0.002)	35.64* (18.75)	15.34*** (2.95)	-0.90*** (0.25)
6	Violent	> max.	0.505	34.33	1.30 (0.25)	80.77** (25.65)	0.01*** (0.002)	15.55 (20.72)	31.97*** (3.25)	-0.63* (0.19)
7	Violent	5	0.546	28.79	1.76 (0.19)	71.87*** (21.39)	0.01*** (0.002)	17.92 (17.27)	28.86*** (2.71)	-0.59* (0.24)
8	Violent	4	0.563	26.33	1.94 (0.16)	67.85*** (19.55)	0.01*** (0.002)	17.89 (15.78)	27.00*** (2.48)	-0.58** (0.22)
9	Violent	3	0.590	23.13	1.83 (0.18)	56.60*** (17.21)	0.01*** (0.002)	19.19 (13.90)	25.34*** (2.18)	-0.48* (0.19)
10	Violent	2	0.600	17.88	1.61 (0.21)	44.01*** (13.33)	0.01*** (0.001)	13.05 (10.77)	19.80*** (1.69)	-0.37* (0.15)

† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; # of places in Cincinnati: 124,127; N = 110

As predicted in hypothesis 3, the standard error of the regression and intercept values decline as hotspot crimes are removed. That is, the average distance of points to the regression line decline as the hotspot crimes are removed. Moreover, the overall number of crimes modeled decline hence a decrease in the intercept. The total population variable remains a consistent and meaningful control variable in all models. Concentrated disadvantage and residential mobility remained consistent, statistically significant predictors of both crime types regardless of how many hotspot crimes were removed from the data. The direction of these relationship also remained consistent across all models. However, as the hotspot crimes were removed, the magnitude of the estimates varied. In the property crime models, when I applied a stricter definition for identifying hotspots, concentrated disadvantage increased and residential mobility decreased. As I relaxed the hotspot definition the beta values for both of these variables declined steadily. Conversely for violent crime, the magnitude of these variables declined steadily as the definition of a hotspot became less onerous.

Finally, the racial diversity variable was a significant predictor of property crime, but not violent crime. I observed the most substantial magnitude drop in a beta values between the model using all property crime ($\beta = 117.36$) and the model using property crime absent crimes at hotspots with five or more crimes per place ($\beta = 57.72$). Of note to readers, while the former estimate was statistically significant ($p = 0.028$), the latter was not, but came very close to the traditionally accepted 0.05 level for statistical significance ($p = 0.066$). All subsequent coefficients were significant predictors of property crime. These results imply that while racial diversity is a significant predictor of property crime, its degree of impact may not be as pronounced as previously indicated.

Table 8.9. Neighborhood models using only crimes from hotspots, spatial error regressions, Cincinnati census tracts, 2010

Model	Crime Type	Hotspot defined as X+ crimes/year	Neighborhood model statistics							
			Pseudo-R^2	SE of Regression	Likelihood Ratio Test for Spatial Dependence (p)	Intercept (SE)	Total Population (SE)	Racial Diversity (SE)	Concentrated Disadvantage (SE)	Residential Mobility (SE)
11	Property	5	0.121	50.31	0.07 (0.79)	68.33 (39.21)	0.005 (0.004)	60.08 (31.83)	-1.55 (5.04)	-0.93* (0.42)
12	Property	4	0.146	52.91	0.54 (0.46)	80.38 (41.96)	0.007 (0.004)	62.31 (34.25)	0.28 (5.44)	-1.11* (0.45)
13	Property	3	0.176	59.36	0.77 (0.38)	105.66* (47.29)	0.01* (0.004)	69.71 (38.66)	2.31 (6.14)	-1.38** (0.51)
14	Property	2	0.260	67.01	1.41 (0.23)	143.48** (53.92)	0.02*** (0.005)	92.53* (44.28)	8.85 (7.05)	-1.83** (0.57)
15	Violent	5	0.106	9.18	0.01 (0.95)	9.04 (7.10)	0.001 (0.001)	-1.39 (5.75)	3.00** (0.91)	-0.05 (0.08)
16	Violent	4	0.162	11.42	0.66 (0.42)	10.91 (9.09)	0.001 (0.001)	-0.15 (7.42)	4.56*** (1.18)	-0.04 (0.10)
17	Violent	3	0.213	14.42	2.60 (0.11)	19.37 (11.76)	0.001 (0.001)	-0.34 (9.72)	5.82*** (1.55)	-0.12 (0.12)
18	Violent	2	0.298	20.04	1.22 (0.27)	37.01* (14.97)	0.002 (0.001)	2.58 (12.09)	12.16*** (1.90)	-0.26 (0.17)

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; # of places in Cincinnati: 124,127; N = 110

In the regression models using hotspot only crime, I observed a very different trend. As seen in table 8.9, structural variables are poorly associated with hotspot crimes. When I used a stricter definition of a hotspot, the pseudo-R^2 values were slightly above 0.100. However, as I relaxed the definition of a hotspot, these statistics increased somewhat but did not exceed 0.300. Both the standard error of the regression and intercept values increased as I relaxed the definition of a hotspot as well. Again, this was not surprising as relaxing the definition meant increasing the number of crimes included in the regression models as well as the number of crimes likely attributed to neighborhood effects. Though the total population variable remained relatively consistent in magnitude, it was seldomly statistically significant.

With the exception of model 14 using property crimes from places with two or more property crimes per year, racial diversity was never a statistically significant predictor of neighborhood crime. Concentrated disadvantage was a consistently significant predictor of violent crime, but not property crime. Conversely, residential mobility was a consistently significant predictor of property crime, but not violent crime.

Another notable trend lies in change in magnitude of the estimates as I relaxed the definition of a hotspot. The overall model fit statistics improved consistently. The magnitude impact of individual variables also tended to improve. Again, this is not surprising given more crimes were analyzed in these models and the less stringent definition of a hotspot meant crimes attributed to neighborhood effects were likely included.

Discussion

In this chapter, I tested the idea that there are at least two crime generating processes contributing to neighborhood crime: resident- and owner/manager-focused effects. To do this, I proposed a new methodology whereby I regressed structural variables on all neighborhood crime

and data absent hotspot crimes. I then tested these same structural variables on the hotspot only crime. Overall the results suggest that both resident- and owner/manager-focused effects contribute to neighborhood crime. Thus, crime at hotspots are not caused by the same mechanisms as non-hotspot neighborhood crime. This conclusion is evident from two main findings. First, the model fit statistics improved when crimes from hotpots were removed from the regression analyses. That is, the structural variables were better at predicting neighborhood crime when crimes at the most extreme hotspots were removed from the data. However, when hotspot crimes were removed the beta values for racial diversity and residential mobility declined. Thus, the amount of impact these variables have on neighborhood crime may be less than previously believed. Second, in the hotspot crime only models, structural variables did a much poorer job of explaining crime at hotspots. This implies that place-based crime has a different causal mechanism than neighborhood crime.

These findings have important implications for research of macro-level crime trends. Specifically, explanations rooted in social disorganization theory may have been obscured by crime caused by other processes. That is, by including place-based crimes that have different causal mechanisms in macro-level analyses, the true explanatory power of structural variables has been misspecified. Much like Moffitt's (1993) discovery of two different categories of juvenile delinquents that require separate explanation and analysis, these results suggest that we should disaggregate crime data and analyze them separately. Neighborhood models should use structural variables to explain neighborhood effects, and place-based variables rooted in place management and opportunity theories should be used to examine crime at hotspots.

It is also possible that other crime processes are contributing to neighborhood crime. For instance, some research has used street segments as a unique unit of analyses to understand crime

processes. In fact, some have argued that "hotspots of social disorganization" characterized by constructs such as racial heterogeneity, informal social control, and collective efficacy can even occur at the street segment level (Weisburd, Groff & Yang, 2012, p. 143).

Furthermore, we must consider whether these neighborhood- and place-based effects interact with one another. As shown in the hotspot property crime only model whereby a hotspot was defined as places with 2 or more crimes per year, several structural variables were predictors of variation in neighborhood crime. However, the pseudo-R^2 values were smaller than the corresponding ones using all crime data. Finding significant results when hotspots have a more relaxed definition indicate that structural effects play at least part of a role. Other causal mechanisms are yet to be identified.

Overall, this study indicates that we need to think differently about neighborhood crime. Results from this study coupled with those from the preceding chapters suggest some important directions for future research. In the next chapter I discuss the theoretical and methodological implications of this work. This includes a consideration of how the Neo-Jacobian perspective can help inform research on neighborhood crime, and how Jane Jacobs' approach to studying cities, streets, and those who use them is still worthwhile.

CHAPTER IX.
CONCLUSIONS

> "*You've got to get out and walk. Walk, and you will see that many of the assumptions on which [redevelopment] projects depend are visibly wrong*" (Jacobs, 1958, pp. 86-7).

At the beginning of this dissertation I took a strong stance. I argued that criminologists have misinterpreted Jane Jacobs' work about crime and proposed a Neo-Jacobian perspective to understand neighborhood crime. Specifically, it outlines an owner/manager-focused explanation. Results from the studies provide support for the Neo-Jacobian perspective and the contribution of owner/manager-focused effects. However, they do not refute the influence of resident-focused explanations. Instead, they suggest that at least two separate crime generating processes contribute to neighborhood crime. This implies the consideration for a new way to unite resident- and owner/manager-focused theories in our understanding of neighborhood crime.

In this chapter, I begin by summarizing the theoretical propositions and empirical results presented in the preceding chapters. I follow this by providing the overall implications of the work, namely how we should think about neighborhood crime and how we should study it. Lastly, I propose directions for future research followed by concluding thoughts on Jane Jacobs' legacy.

Summary of the Dissertation

In chapter 4 I proposed a new theoretical framework to understand neighborhood crime. Through a reinterpretation of Jane Jacobs' work, I developed a Neo-Jacobian perspective of place and neighborhood crime. My core arguments are that much of Jacobs' (1961) work has been misinterpreted by criminologists. This was largely due to the historical time period in which her work was released. At the time, the social disorganization approach was the only geographically-based explanation of crime. Consequently, criminologists used this resident-

focused perspective when interpreting her work (Browning et al., 2010; Hope, 1995; Perkins et al., 1992; Smith & Clarke, 2012; Tonry & Farrington, 1995; Wortley & Townsley, 2017). Many also believed that her ideas inspired Newman's (1973) work on defensible space (Borrion & Koch, 2019; Browning et al., 2017; Clarke, 1995; Cozens, 2008; Cozens & Hillier, 2012; Mawby, 2017; Merry, 1981; Taylor & Gottfredson, 1986), which largely attributed surveillance responsibilities on residents. However, there is little evidence to suggest that Newman was directly inspired by her work. Instead, she proposed very different ideas and attributed informal social control to a different group, namely shopkeepers (see Jacobs 1956; 1961).

The Neo-Jacobian perspective asserts that those who own and manage property play a fundamental role in neighborhood functioning. As Jacobs (1961) describes, these individuals often hold a high status in the community, know many of the people who frequent the area (both residents and non-residents such as other business owners), and are motivated to keep the surrounding area safe. In short, Jacobs (1961) identified property managers—small shopkeepers in particular—over a third of a century before criminologists developed place management theory (i.e., Eck, 1994). Place management theory (see Eck & Madensen, 2018) specifically points to property owners as the responsible parties for whatever occurs at a particular place. Crime control is one of the many responsibilities. Place managers are far more inclined to take action against crime because it poses a threat to their business. Owners want their patrons to feel safe to encourage their return for more business.

Jacobs (1961) also emphasized the importance of economic investment within cities. Specifically, cities are built deliberately through the decisions and actions of certain institutions and individuals. Governments and banks can control how cities are configured, the layouts of streets, and who can qualify for loans to make private investments. Individuals with the means to

purchase property can decide what such parcels are used for, who can used them, and how they are to behave while at them. As such, neighborhoods emerge through deliberate decisions made by those who own property. They do not emerge or change organically according to the traditional ecological theories (Light, 2009; Park & Burgess, 1925; Shaw & McKay, 1942).

The Neo-Jacobian perspective provides a bottom-up approach whereby neighborhoods are an aggregation of many property parcels. The management of these parcels drives area crime rates. That is, areas with more poorly manages places will have more crime than areas with fewer poorly managed places. This implies that we should start with crime at the smallest measurable units—such as addresses—and build up toward area functions. It assumes that high crime at chronic hotspots are the systematic product of poor place management and that neighborhood crime depends on the relative number of poorly managed places in an area. Once crime at these micro-spatial places are accounted for, the remaining variation in crime within a larger unit is due to other factors such as structural area effects.

Based on this theoretical framework, I conducted three studies to explore how property ownership influences neighborhood crime. The first study consists of qualitative interviews with various people connected to Walnut Hills, a neighborhood in Cincinnati, Ohio. Participants' involvement in the neighborhood ranged from business owners, property developers, residents, and municipal employees, among others. This was an exploratory study designed to understand how property ownership impacts neighborhood development. I asked participants questions about Walnut Hills such as why they believe the neighborhood had been crime ridden and what factors were changing this. Information gathered from the interviews pointed toward the importance of outward factors (Snodgrass, 1976), namely several historic, political, and economic factors. Results suggested three core ideas. First, neighborhood history matters. The

political decisions made from how streets are configured to the economic vitality of businesses were purported to impact crime. Without a strong business district run by responsible place managers, crime is far more difficult to control. Second, control in neighborhoods is largely external and driven by property ownership, at least in the neighborhood I studied. The most substantial change can occur through decisions made by property owners, most of whom are not residents of the neighborhoods where they own such property. Lastly, property owners play a fundamental role in neighborhood function, and consequently crime. Many business owners and property managers know one another, and in safer or improving neighborhoods, there appears to be a network among them in attempts to make improvements in neighborhoods. Akin to Jacob's (1961) intricate sidewalk ballet, shopkeepers know one another as well as local residents, and take a vested interest in maintaining street safety. Doing so puts customers at ease and increases their likelihood of returning to the businesses again.

The second study looked specifically at crime in Walnut Hills, and how changes at property parcels influenced crime overall in the neighborhood. Specifically, I assessed the place-based approach to redevelopment used by the Walnut Hills Redevelopment Foundation (WHRF). After compiling a timeline of how individuals' properties have changed, I conducted several time series analyses to assess their impact on neighborhood crime. Although the results suggested that the removal of hotspots yielded a significant decrease in neighborhood crime, the addition of newly manages places was less certain. Individually, they did not have as large of an impact on decreasing crime. However, some analyses suggest that they may be playing a part in sustaining the crime prevention effects observed following the removal of hotspots. Consequently, the individual crime reduction effect of each added place was less pronounced, but their collective impact was observed in the data.

Results for the first two studies suggests that property ownership plays a role in the presence or absence of neighborhood crime. Moreover, the environmental criminology literature suggests different causal mechanisms for crime at hotspots that are not accounted for in the ecological literature. Thus, in the third study I tested the argument that there are two distinct crime generating processes contributing to neighborhood crime: 1. Resident-focused effects, and 2. Owner-manager effects. The results indicated that structural effects—such as poverty, residential mobility, and ethnic heterogeneity—were poor predictors of crime at hotspots. Moreover, the statistical models of neighborhood crime improved when hotspot crimes were removed from the analyses. These results provide support for the notion that neighborhood crime is derived from at least two sources. This provides additional support for the ideas put forth by Jacobs (1961) and Snodgrass (1976) regarding both inward and outward factors.

Overall Implications

Given these results, several implications can be drawn from this dissertation. Some relate directly to crime, while others address broader social issues. For instance, from a policy standpoint these results indicate that it is in a neighborhood's best interest to find developers who care about neighborhoods. As previously mentioned, although financial incentives will shape many of their decisions, those with a social conscience are best for neighborhoods. As such, cities need to find ways to incentivize responsible developers to take on projects within neighborhoods who will try to mitigate some of the negative effects of gentrification. In Walnut Hills, for example, this included the use of an equitable development scorecard (WHRF, n.d.), of which ideas were inspired from similar work by a community development working group in Twin Cities, MN (see Community Engagement Steering Committee Equitable Development Working Group, 2014; 2016). When properties are sold by the city or community development

corporations for redevelopment, they typically request bids/proposals from interested developers. Use of an equitable scorecard evaluation method encourages the selection of developers on additional factors other than price. Other considerations include how the developer intends to involve the community in the project. This can vary from holding community meetings receive resident input, to pledging to provide employment through the project to members of the community. Other contributions can include a commitment to make a certain percentage of resulting residential units into affordable housing so that long-term, low income residents will have housing options available to them. This has been a more recent strategy used in several cities to try and address problems surrounding displacing residents in gentrifying areas (Community Engagement Steering Committee Equitable Development Working Group, 2014; 2016; WHRF, n.d.). Walnut Hills has also been making efforts to persuade the City of Cincinnati to "create additional development control districts to protect residential areas from commercial developers (Smith, 2019, n.p.). Here, the goal is to assure the more residential sections of neighborhoods are not overtaken by commercial development.

Though these issues may not be directly related to crime, the results suggest that focus on these property development issues can influence crime. As much of Jacobs' (1961) and Eck's (1994) place management work indicates, crime—or lack of it—can be the byproduct of how a property is managed. It is likely that well-managed properties take little to no action in crime prevention because it is not a problem to begin with. However, if issues were to arise, such owners would be most likely to take action to mitigate the problem. I argue that the more direct criminological implications of this dissertation can be sorted into two overall categories: 1. How we think about neighborhood crime, and 2. How we study crime. Below, I discuss the specific advancements that this dissertation provides.

How We Think About Neighborhood Crime

The resident-focused perspective has a long history in criminology. Numerous studies have provided important insights into the influences of structural effects in neighborhoods (for example, see Sampson & Groves, 1989; Sampson et al., 1997; Veysey & Messner, 1999; Warner & Rountree, 1997). However, this research is almost exclusively focused on inward social factors that contribute to neighborhood crime (Snodgrass, 1976). The results from this dissertation suggest that we also need to consider the outward factors such as "business and industry [that have been] essentially immune from analysis, imputation, and responsibility in the causes of delinquency" (Snodgrass, 1976, p. 10). Not only does this uncover another set of mechanisms to study within neighborhoods, but it actually improves our understanding of how inward structural factors influence neighborhood crime. As shown in chapter 8, the removal of hotspot crimes improved the statistical models predicting neighborhood crime using structural factors. The inclusion of hotspot crimes which are brought about by owners and managers appears to confound our understanding of structural effects. As such, future studies of neighborhood crime should disaggregate data to examine the separate mechanisms that are functioning. This also means that past studies of neighborhood crime may have underestimated the influence of structural effects on neighborhood crime.

Results from this dissertation also indicate that the influence of places are distinct, but crucial in creating neighborhood crime. This is not generally discussed in the resident-focused research of neighborhood crime. Specifically, such work assesses the macro-level influences of crime, but does not account for the distinct places within them. Oftentimes, this approach does not discuss why most places in high crime neighborhoods experience little to no crime, while a small number of places are crime hotspots. In line with Jacobs (1961), the findings in this dissertation suggest that crime at hotspots are caused by mechanisms related to property

ownership and management. Thus, we need to focus on these specific parcels using strategies distinct from those suggested by resident-focused perspectives. Once the hotspots have been identified and disaggregated, much of the remaining crime appears to be attributed to structural effects.

Though work on place management has shown the importance of ownership (see Eck, 1994; Eck & Madensen, 2018), these studies are typically focused on single properties without much discussion of their context (Wilcox & Swartz, 2018). This study provides insight into how property ownership operates within neighborhoods. Though crime studies of places within neighborhoods date back over 100 years (see DuBois, 1899; Hoyt, 1936; Philpott, 1978), few criminological works cite them (Gabbidon, 1996). However, places were not considered again until 1989 when Sherman and colleagues published their work on crime hotspots in Criminology. But again, this work was not focused on how places fit within neighborhoods. Place management theory has since provided a framework to study and understand crime at places.

Because the resident-focused research does not account for crime hotspots (Eck & Madensen-Herold, 2018), and the owner/manager-focused research does not account for context (Wilcox & Swartz, 2018; Wilcox & Tillyer, 2018), we must consider uniting these perspectives to understand neighborhood crime. Results from chapter 8 clearly demonstrate that there are different resident- versus owner/manager-based processes contributing to neighborhood crime (see also Eck, 2005). Thus, similar to Moffitt's (1993) identification of two distinct offender typologies, these results indicate that separate analyses of disaggregate data may benefit our understanding of neighborhood crime. The inclusion of crime from hotspots found in the aggregate data appears to obscure the explanatory power of structural factors on neighborhood crime.

That said, the study did not examine the potential interaction between these processes. It is possible these crime generating processes do not act independent of each other. As stated by Weisburd et al. (2016), nothing stated by either the place-based or neighborhood approaches "…rules out the existence of mechanisms invoked by the other" (p. 61). For instance, it is possible that action at a place, can extend outward to other properties and the neighborhood at large. More specifically,

> a street segment with well-managed proprietary places may have far less disorder and crime outside on sidewalks, streets, and other public spaces than a street segment with one or more poorly managed places. That is because disorder might spill out from disorderly facilities and overwhelm informal social controls on the street segment (Weisburd et al., 2016, p. 66).

This aligns much with the Red Point Market example as well as accounts of the diffusion of crime control benefits (Clarke & Weisburd, 1994) and crime radiators (Bowers, 2014). Moreover, the Place-based Investigations of Violent Offender Territories (P.I.V.O.T.) from Cincinnati, Ohio has identified the existence of several properties within a place network that facilitate crime at hotspots (Isaac, Hammer, Christenson, & Madensen, 2017; Madensen, Herold, Hammer, & Christenson, 2017). The inter-connectedness of crime places shown in these examples suggests that the tests in chapters seven and eight provide a conservative estimate of how much owner/manager-focused effects influence crime. Most recently, Wilcox and Tillyer (2018) have also raised the need to consider the interplay between places and neighborhoods. They argue that micro-level crime opportunities are located within a broader environmental context that impacts whether offenders choose to commit an offense (see also Wilcox et al., 2003). Thus, we must continue to consider the interaction between the owner/manager-based mechanisms and those more macro-level focused resident-based mechanisms.

Results from my dissertation also highlight that places and their owners/managers play a fundamental role in controlling or abetting neighborhood crime. Their ownership of property

affords them a substantial amount of control within neighborhoods. Yet unlike the resident-focused perspective, most of these owners and managers do not live in the neighborhood. They are not residents, yet their decisions and action can significantly impact neighborhood functioning. This means that at least some level of control is external to the neighborhood. Moreover, these individuals would not have been captured in the resident surveys popular in the study of neighborhood crime. In criminology, studies always use "residents as informants about neighborhood context" (Sampson, 2002, p. 218). So, despite having control, the influence of owners and managers has gone largely unstudied in the criminological literature. Consequently, researchers need to further examine this other group of key players.

That said, some of the mechanisms described in the resident-focused perspective may also operate among place managers. For instance, there appears to be a network of place managers operating within Walnut Hills that also extend into the larger metropolitan area. Not only do these individuals know and work with each other, many express a desire to improve the neighborhood and make it safer. It is possible that informal social control and collective efficacy in Walnut Hills could be increasing as a consequence of the redevelopment occurring. However, action to self-police the neighborhood may be more likely exhibited among place managers than residents. Not only did developers express a desire to lease their store-front property to responsible business owners, but these individuals have a financial interest in keeping the neighborhood safe. There is other evidence of this kind of behavior among business owners in other Cincinnati neighborhoods (see Monk, 2012). As described in place management theory (Eck, 1994; Eck & Madensen, 2018), the acquisition of resources is fundamental to place managers' ability to maintain a viable business and remain operational. If customers feel unsafe, they likely will not return. That loss of revenue could lead business to shut down. Thus,

neighborhood surveys of place managers might reveal similar constructs, just among a different group in the neighborhood.

Decisions made by several non-residents including property developers, owners, municipal employees, politicians, and business owners can also play an indirect role in creating crime. As the first theme in chapter 6 described, participants believed the conversion of East McMillan Street and William Howard Taft Road from a two- to one-way street lead to the demise of business in Walnut Hills, and the subsequent rise in crime. These decisions were largely political and were likely made without considering how it would impact crime in the neighborhood. To be fair, it is unlikely anyone could have predicted this outcome. But I argue this is an important insight in and of itself. Crime is often the byproduct of decisions and actions made for reasons seemingly unconnected with crime. Indeed, this is the core lesson of routine activities theory (Cohen & Felson, 1979), and environmental criminology in general.

In several interviews I ended up having conversations with participants about mistakes or near misses made throughout their careers. In this context, two examples stand out. The first emerged when I asked a developer if he had heard of Jane Jacobs. His face lit up at the mention of her name and he told me a story. Many years earlier, he had purchased and rehabilitated a historic apartment building in Walnut Hills. One side of the building and its parking lot bordered East McMillan Street, namely the main business corridor in the neighborhood. The developer decided to build a wall off of the apartment building and along the outer border of the parking lot in the same style as the building. He wanted to pay specific homage to the building's historic design by carrying it through this wall. It created a barrier between the parking lot and sidewalk on the neighborhood's most important main street. In response to building the wall, one of the building's first residents handed the developer a copy of Jacobs' (1961) famous book. After

reading it, the developer realized he had made a terrible mistake in building the wall. It created a barrier that nearly eliminated surveillance, and rendered that portion of the street block pedestrian 'unfriendly'. The developer saw merits in Jacobs' (1961) ideas regarding pedestrian friendly streets. Such designs encouraged people to interact, look out for one another, and use space for legitimate purposes. The developer ended his story by saying that he was grateful for the resident giving him the book otherwise he probably would have built walls all over the neighborhood.

The second story was told by a municipal employee who was involved in work on the block of East McMillan Street containing the building that housed the original location for Graeter's ice cream shop.[16] The standard protocol for redevelopment of historic buildings is to stabilize buildings first, then begin renovations, but keeping as much as the original architecture intact as possible. Assessments of the building deemed it un-salvageable with the exception of the storefront façade that faced the street. Knowing that the majority of the building would have to be demolished, someone suggested that they keep the original wall facing the street. Then they could create communal space behind it for people in the community to use. Several members on the project were immensely excited at the notion of keeping the original façade and devised strategies to make it work. However, they quickly realized that although their intentions to preserve a historic artifact in the neighborhood were well-meaning, it could cause serious problems. The members of the team realized that creating a communal area that was completely blocked off from view from the street would likely create a prime place for crime and disorder, such as drug dealing. As such, they ended up demolishing the entire building. Today, the location remains an open outdoor patio shared between two newly-opened businesses.

[16] Graeter's is an ice cream franchise that is famous throughout the Midwestern United States. It is of particular significance here because it was founded in Cincinnati, Ohio in 1870.

Given these accounts, I believe it would be immensely beneficial to educate people involved in fields such as property development, urban planning, and public policy about how their decisions influence crime. The impact may not be direct, nor immediate, but learning from past mistakes is one of the best means to make future decisions. Society would benefit if people whose jobs have no direct ties to the criminal justice system understand how their decisions can create (or inhibit) opportunities for crime. As seen in this dissertation, not only can these decisions happen at the micro-spatial level (i.e., what most environmental criminologists and place management theory deals with), but also at a macro-level.

Lastly, encouraging collaboration between the police and property owners to combat crime appears to be a promising avenue to pursue further. As discussed in chapter 7, key stakeholders developed a somewhat new approach to address crime at hotspots in Walnut Hills. While past efforts have used hotspots policing and demonstrated significant reductions in crime (Braga, 2005; Braga, Papachristos, & Hureau, 2014), less is known about the sustainability of such efforts. In fact, Sherman's (1990) work on residual deterrence was rooted in the finding that crime eventually returns (at least somewhat) once intensive, targeted enforcement ceases. As described by individuals involved in crime control in Walnut Hills, ownership of these properties was often transferred to other offenders within the criminal network and eventually re-opened following the intervention. However, acquiring property ownership in tandem with arresting offenders involved at the location appears to have a crime sustaining effect. By taking ownership away, it removed the opportunity for offenders to recommence criminal activity. Even at locations such as Red Point Market that still have yet to re-open with a legitimate business (they are currently under construction), crime continues to be absent at these places. These findings provide support for Eck and Madensen-Herold's (2018) place manager typologies. When the

Red Point Market was in operation, its owner actively encouraged crime at around the property. According to their typologies, this would make him a promoter. Once ownership was taken by the City of Cincinnati, crime ceased, even while the property is not in use. This is a form of passive—yet still effective—place management, making the current owners reactors. Thus, supplementing police strategy with property ownership could be of great benefit to crime reduction efforts within neighborhoods.

This work also suggests that the police could benefit by identifying the networks of property owners, stakeholders, and local officials who wield control within these neighborhoods. There appears to be a strong and stable network of external prosocial and influential people operating within neighborhoods. A new policing strategy placing officers at the center of this network as "public characters" may be an effective way to exert positive change in problem areas. This could be considered a revised form a community-oriented policing. The authority of police officers makes them ideal agents to co-ordinate multi-agency action to reduce neighborhood crime. By using the police as central "public characters" to leverage the powers of prosocial stakeholders and agencies, we can develop more effective, long-term crime reduction strategies.

How We Study Neighborhood Crime

In this dissertation, I used a mixed methods approach to examine neighborhood crime and proposed an additional method to test how resident- and owner-focused effects operate within neighborhoods. The Neo-Jacobian perspective I described above also provides another framework by which to think about neighborhoods. Results from this dissertation provide support for the Neo-Jacobian perspective. However, future research could certainly attempt to falsify some of what has been found by replicating this study elsewhere. But regardless of how the Neo-Jacobian perspective holds up to empirical testing, Jacobs' (1961) work still holds a

strong legacy, namely the use of mixed methods. I believe that the use of qualitative and quantitative methods should be strongly encouraged in future work.

As previously mentioned, Jacobs was a female, non-academic who based her ideas on anecdotal evidence, and challenged traditionally accepted planning theory. For these reasons, many criminologists, urban planners, and architects disregarded her ideas (Cozens, 2008; Cozens & Hillier, 2012; Graham, 2016; Mawby, 1977; Page, 2011; Wekerle, 2000). This criticism is misguided. The role of science is to attempt to falsify ideas (Popper, 1992). The source of the original theory need not be empirically based. In fact, Popper (1992) argued that "there are all kinds of sources of our knowledge; but *none has authority* (emphasis in original)" (p. 24). Moreover, he believed that

> The question about the source of our knowledge can be replaced in a similar way. It has always been asked in the spirit of: 'What are the best sources of our knowledge—the most reliable ones, those which will not lead us into error, and those to which we can and must turn, in case of doubt, as the last court of appeal?' I propose to assume, instead, that no such ideal sources exist—no more than ideal rulers—and that *all* 'sources' are liable to lead us into error at times. And I propose to replace, therefore, the question of the sources of our knowledge by the entirely different question: 'How can we hope to detect and eliminate error?' (Popper, 1992, p. 25).

To Popper (1992), it does not matter where the ideas for our theories come from. This means that we should be less concerned with the sources of our information. Instead, our assessment of good theories should come from whether they stand up to empirical testing (see also Pratt, 2016). As Popper (1992) argues, "…the fate of a theory, through its acceptance or rejection, is decided by observation and experiment—by the result of tests" (p. 54).

As such, Jacobs' (1961) ideas should not have been disregarded. If anything, her use of dozens of anecdotal examples aided my ability to understand her ideas. Scholars in other fields have praised her for getting "her reader's attention by displaying anecdotes" (Harris, 2011, p. 65). Ignoring her examples may be what lead to a misinterpretation of her work. Criminologists

should adopt many of her approaches to studying phenomena in society. Jacobs spoke to many people and conducted extensive field work in cities across the continent. Some have also criticized her theories on the basis that they were derived only from her experiences living in New York City. Yet, this could not be further from the truth. In fact, as Kanigel (2016) describes

> *The Death and Life of Great American Cities* could seem so much the product of Jane's distinctive intellect that one might forget that it was 'researched': she visited cities, talked to people, traded ideas with experts, gathered statistics, sought out pointed bits of knowledge" (p. 176).

Again, this fact is only apparent when you consider Jacobs' (1961) examples used to illustrate her theory. Examples in *Death and Life* feature cities such as New York, Toronto, Boston, Philadelphia, Cincinnati, and Pittsburg among others. And some of her earlier work covers city building practices in Cleveland, Washington, Fort Worth, and Baltimore (Zipp & Storring, 2017). In fact, she spent much of 1955 researching renewal efforts in Philadelphia and toured the city with planning officials (see Jacobs, 1955).

Walking city streets and talking with various stakeholders greatly enhanced Jacob's understanding of cities. In fact, in the front matter of *Death and Life*, she included a separate "Illustrations" page that reads:

> The scenes that illustrate this book are all about us. For illustrations, please look closely at real cities. While you are looking, you might as well also listen, linger and think about what you see (Jacobs, 1961, n.p.).

Following her by example helped me generate new ideas, build theory, and interpret my quantitative results. Though there is immense value in quantitative datasets, certain information is entirely absent from them. For instance, I would not have been able to explain the unexpected result regarding the crime increase from chance at the St. James Cut. A substantial portion of insight from this dissertation would be absent had I not conducted the interviews and field work.

Much of this suggestion also aligns with some of the emerging literature on crime prevention policy and evaluation. Johnson, Tilley, and Bowers (2015) proposed the EMMIE[17] framework to encourage a more comprehensive understanding of interventions. They assert that although the determination of effect sizes is important, the studies that produce them often lack detail about the intervention (see also Eck, 2006; 2010). Instead of describing how an intervention was implemented, the focus is placed on whether it worked or not. This is inefficient to practitioners because effect sizes alone do not necessarily explain why an intervention generates a particular result. It also does nothing to help practitioners faithfully implement an effective program. Additional information is required to determine why a particular strategy worked and whether it would work elsewhere (Cartwright & Hardie, 2012). Instead, we need to accompany the analyses with a more thorough description and understanding of the causal mechanisms that generate a given outcome. This is particularly important because some interventions might fail simply because they were implemented at the wrong: intensity, time, or place (see Linning & Eck, 2018 for examples). This does not mean the strategy is ineffective, it simply means it was implemented incorrectly. Using both quantitative and qualitative approaches to studying crime and interventions more often would be of benefit to the field (relatedly see Cullen, 2011 for a call to criminologists to "talk to offenders, not high-school students").

I also wish to emphasize the value of studying Walnut Hills while it was redeveloping. Examining a neighborhood in the midst of wide scale redevelopment is important. Researching change after-the-fact certainly has value, however, you risk losing access to those involved with the process. By studying Walnut Hills as it redeveloped, I gathered more in-depth insight into the

[17] EMMIE is an acronym for the: 1. *effect* direction and size; 2. *mechanisms/mediators* activated; 3. *moderators/contexts* relevant; 4. sources of success and failure of *implementation*; 5. *economic* costs of the intervention (see Johnson et al., 2015).

places I was examining and who was directly involved in changing them. While the lack of empirical analysis beyond 2016 creates a right-censoring issue, follow up studies could track the progress of the neighborhood. The trends and results may change as more data become available. However, the contextual information collected throughout this process may not be accessible many years down the road. For instance, Kevin Wright resigned from his role at the WHRF in April of 2018 (see Demeropolis, 2018). This occurred after the study period, but could have important implications for how redevelopment continues in the neighborhood. So far, the work does not seem to have lost momentum. In fact, as of spring 2018, the WHRF has found a new executive director (Caproni, 2018) and several multi-million dollar projects are currently underway in the neighborhood (Brownfield, 2019; Fast, 2018; Miller, 2019; Rogers, 2018a; Smith-Randolph, 2018). For instance, Model Group is completing a $20 million project to re-open the Paramount Building which will be home to Esoteric Brewing Company—the first minority-owned brewery in the city—along with several residential units (Brownfield, 2018). They are also partnering with Cincinnati Christ Church Cathedral and Cincinnati Union Bell to complete the Scholar House project across the street to bring affordable housing to single, low-income parents who are pursuing post-secondary degrees (Rogers, 2018b). Thus, a follow up study is certainly warranted and would be valuable to the place and neighborhood crime literature.

Directions for Future Research

Though the results from my dissertation provide support for the Neo-Jacobian perspective, additional work examining the influence of outward factors on crime is needed. One of the first avenues that warrants investigation is an assessment of how different crime types are affected by redevelopment. In particular, researchers should examine drug offenses. Many of the

examples given through the interviews and field work involved drug dealing. Yet I did not have access to such data. Nevertheless, crime data absent drug offenses still generated significant results. Thus I have generated conservative estimates of the true impact of the place-based approach to redevelopment and comparison between resident- and owner-focused crimes.

Second, researchers should explore indicators other than crime events. Such data only include crimes that were reported to or discovered by the police and thus only provide a part of the overall picture in the neighborhood. Crime makes up only one component of public safety. Other outcome measures that are equally important could be explored, for instance: calls for service, drug overdoses, and traffic accidents. As my participants described, one of the many benefits of converting East McMillan Street and William Howard Taft Road from a one- to two-way streets was that it slowed traffic down. It is very likely that this also reduced the number of traffic accidents that occurred in the neighborhood. One of my participants reported this, but verification using official data would be beneficial. As criminologists, we typically focus solely on crime, however, several other indicators would likely show additional benefits stemming from redevelopment.[18]

Third, future research should investigate the possibility of crime displacement and diffusion of crime control benefits. Not only could this happen at a micro-level, such as crimes being exported to adjacent blocks, but redevelopment may also displace crime to other neighborhoods. A frequent critique of hotspot-based crime prevention or policing interventions is that attention at one place will simply move crime to other places, times, or targets (see Clarke & Bowers, 2017; Eck, 1993; Reppetto, 1976). In fact, during one of my interviews a participant expressed the belief that the redevelopment in Walnut Hills caused crime to move from the main

[18] I wish to acknowledge Dr. Dale Willits for his suggestions and insights about the content of this paragraph.

business corridor (i.e., East McMillan Street and William Howard Taft Road) to smaller side streets.

> Jordan: Years back when we first started this, when we first started planning for the revitalization of the business district, the Area Council and the business association and the Redevelopment Foundation worked closely to help make the business district itself safer. And so the Area Council put forth a really big effort, but what that did is it made the business corridor appear to be safer. But it just dispersed the crime to the side streets, the back alleys, pushed it out of sight. And so the pockets, like the south west quadrant, all the crime that used to be visible in the business district now is just out of sight.
>
> SL: I appreciate you telling me that because I only moved here a few years ago and this is just sort of the impression that I've been getting as an outsider.
>
> J: Yep. Yeah, well me too. And these are really open and honest conversations that our leadership, the area council, the business group, and the redevelopment foundation have been having recently on it's our responsibility now as business owners to hear the residents' cry for safety. Because that was a concerted effort to help and clean up the business district.
>
> SL: So when you say it's your responsibility to hear the residents' concern about safety, what do you feel the businesses should be doing in terms of crime? What is your role in that?
>
> J: Um, I don't know exactly. The first thing is just listening and caring. Because it's really easy as a business owner to say hey, I don't have time for that, I have to be concerned about running my business. But understanding that being a business owner, you're not just planting down inside a community, and independent of that community, but being in a community, especially one like Walnut Hills, that is invested in the community, you really have to connect with the community around you. And that starts with just listening and caring and being involved in, you know safety meetings and whatever initiatives that come out. I don't know what the answers are, and I don't want to be arrogant enough to say that I know what those answers are, but being involved starts with just listening. That's a good first step (Jordan; Business Owner).

Two points should be taken from this excerpt. First, it was notable for an actively-involved business owner to bring up the possibility that the work he has been a part of—and that had the best of intentions—may not have solved the neighborhood's crime problem. He believes it may have simply pushed it elsewhere. Second, it was very telling to hear him express his feelings of duty toward the neighborhood as a consequence of this work. Though he did not know how to address these issues, he makes a point of trying to be involved with the community discourse and listen to the needs of residents.

A follow up examination of crime displacement in Walnut Hills is warranted. Thought I cannot deny the possibility that displacement occurred, results from the current study and findings from past works may provide some insight. In this dissertation my analyses indicated that crime declined overall as a consequence of using a place-based approach to redevelopment in the neighborhood. However, the analyses did not examine whether the remaining crimes were redistributed from adjacent locations at a prior time period. Research suggests that while this is possible, the net benefits of such an intervention makes it worthwhile (see Guerette & Bowers, 2009). If, hypothetically, 10 crimes occurred on the 900 block of East McMillan Street in one month, but following an intervention of places it declined to zero and two side streets experienced two displaced crimes each, that is still a net reduction of 6 crimes. Moreover, much of the crime displacement literature suggests that places adjacent to hotspots can actually experience a diffusion of crime control benefits when interventions are enacted (Clarke & Weisburd, 1994). Thus, redevelopment on the 900 block of East McMillan Street could also reduce crime at three adjacent locations. This fits with the Red Point Market example. Recall that the owner was incentivizing drug users to shoplift goods from the grocery store and pharmacy across the street. The removal of the Red Point Market not only eliminated crime at that property parcel, but it also reduced crime at the adjacent businesses. That said, the above-mentioned displacement of some—just fewer—crimes still requires attention.

Lastly, I strongly encourage replication of my work. Although I found evidence that supported the Neo-Jacobian perspective, additional studies are needed to determine whether this framework still holds after further empirical testing. Studies on property ownership, redevelopment, and crime are emerging (e.g., Alonso, Andrews, & Jorda, 2019), but are still relatively scant in the literature overall. I particularly encourage the use of cases studies in future

work. Many insights can be gained from case studies of specific neighborhoods. First of all, they provide far more detailed and contextual information. Moreover, use of a mixed methods approach helps in compensating for some of the limitations present in quantitative and qualitative approaches (George & Bennett, 2005). The qualitative work I conducted allowed me to better understand the neighborhood's history, the actions and behaviors of key players, and interpret my quantitative results.

By using a mixed methods approach I was also able to show the existence of external neighborhood actors. Though some have theorized about the influence of non-residents in neighborhoods (e.g., Sampson & Wilson, 1995; Snodgrass, 1976), few studies have studied them directly. My results suggest that their actions and decisions can have a profound influence on neighborhood functioning. They also hint at a possible fourth form of social order. As Hunter (1985), Bursik and Grasmick (1993), and Carr (2003) have suggested, neighborhood social control emerges through the presence of three types of social ties: private, parochial, and public. However, these ties are typically described as the links between residents and other internal or external actors. Little discussion links owners or managers to internal or external agencies in this literature. Moreover, these people may not necessarily be closely tied to residents. Thus, further investigation of these external actors is warranted.

Relatedly, there were several types of external actors who I was not able to access for this study. For example, many have suggested that absentee property owners—namely those who own property in a city, but who do not live within it—create problems in neighborhoods (see Eck, 2018b). Some politicians in Cincinnati have tried to reduce absentee ownership in the city due to issues such as decreased property values that result in surrounding areas (see Cincinnati CityBeat, 2013). During my interviews participants echoed similar concerns with such owners.

In one instance, I was told about a check cashing facility that participants believed was bad for their neighborhood. The property was owned by a couple who did not live in the city of Cincinnati. Several business owners in the neighborhood offered to jointly purchase the property from them. However, they refused the offer. The business owners learned that the couple were receiving a years-worth of rent in cash up front that was well-above market rate for that property from the check cashing company. Participants used this as an example of a property owner who was more interested in maximizing profits, than doing what is best for the neighborhood. Future research should identify as many external actors as possible to study their various influences on neighborhood functioning.

By gaining quantitative and qualitative insights about this neighborhood, I was also able to build theory, which in turn can be generalized (see Eck, 2017). That is, the Neo-Jacobian perspective of neighborhood crime is general enough to apply to neighborhoods more widely, yet not so specific that it lends itself to an exclusive subset of them. The fundamental premises of the Neo-Jacobian perspective are that the historical, political, and economic action typically of persons external to the neighborhood have a substantial impact on neighborhood crime. In Walnut Hills, these problems included the building of interstates, the conversion of streets to one-way thoroughfares, and the closing of businesses. Once the latter two changes were reversed, people reported improvements in the neighborhood including its crime levels. These neighborhood-specific examples are just illustrations of these outward factors in effect within the neighborhood.

These general concepts can be translated into other neighborhoods, and simply modified to address the neighborhood-specific outward factor problems they experience. For instance, once the city of Cincinnati substantially increased its funding for property development, many

thought Walnut Hills would be one of the last neighborhoods where significant redevelopment would occur. However, it was one of the first to begin changing. One of my participants provided a likely explanation for this:

> …my point was when people left these properties [he is previously talking about the Durner Building in Walnut Hills], they just left them. You know in Madisonville [a neighborhood of historically higher socioeconomic status than Walnut Hills] those buildings were torn down. So buildings [in Walnut Hills] were left and they were never, well at least somebody cared enough to…well, let me think, this is hard to say. I love old buildings and I hate to see them torn down. But people in places like Madisonville would complain about these derelict buildings in their neighborhood. So the answer in the eighties and nineties was to just tear them down. Here, it was such an impoverished neighborhood, a powerless neighborhood that nobody even complained about these derelict buildings. They just sat there, and they just sat there. Luckily for all of us they didn't complain, and that's typical in a low income, primarily African American community. They totally feel powerless so they didn't complain to the city that these buildings were full of rats and they're boarded up in their neighborhood. So they sat there and sat there. So we were able to put them back together (John; Municipal Employee).

One of the many factors that likely jump-started redevelopment in Walnut Hills was the presence of historic buildings. To incentivize reinvestment, governments offer tax abatements to developers willing to rehabilitate them. And Walnut Hills is rife with historic buildings. In fact, a report by the City Planning Commission (1969) noted that "over 96% of the residential structures in Walnut Hills were constructed before 1940" (p. 4). Furthermore, it stated that "it is useful to note here that a substantial portion of these blighted units are structurally sound and aesthetically desirable structures that would lend themselves to rehabilitation…it is much more economically advisable to rehabilitate than to demolish and construct new units" (City Planning Commission, 1969, p. 5).

However, according to John's accounts, Madisonville struggled to start redevelopment efforts in the 2010s because far fewer of those historic buildings remained. Thus, efforts to bring new development and place managers into the neighborhood has been more challenging. Buildings would need to be constructed from scratch. Madisonville is also one of the less sought

after, though not as crime-ridden as Walnut Hills, neighborhoods in Cincinnati. But I argue that its sources of crime could likely be traced through similar causal mechanisms. The decision to tear down buildings in the eighties and nineties was political. It aligned with much of the urban renewal policies of the time (Jacobs, 1961; Klemek, 2011; Teaford, 1990). Then, similar to Walnut Hills, the absence of businesses in the neighborhood allowed crime to take over.

The conversion of East McMillan Street and William Howard Taft Road back from a one-way to two-way street had a significant impact on improving the entire functioning of the neighborhood, including crime. This phenomenon does not appear to be unique to Walnut Hills. Several other cities—including Vancouver, WA, Oklahoma City, OK, and Minneapolis, MN—have converted crucial downtown streets back to two-way thoroughfares with hopes to revitalize their business districts. So far, many are proclaiming that this change improved the city almost immediately (Ehrenhalt, 2009). The reasons for originally converting these streets to one-ways may have been different, but theoretically they supposedly have a similar impact on the business district, and subsequently crime, in several cities. The City of Cincinnati has also been exploring the benefits of narrowing certain roadways to slow traffic down and make streets "safer for all types of users—drivers, cyclists, and pedestrians alike" (LaFleur, 2019, n.p.). Thus, future neighborhood case studies need to explore whether these outward factors have influence elsewhere.

Jane Jacobs' Continued Legacy

Jane Jacobs' work is still relevant today. While society has certainly changed since she published her work, many of her fundamental ideas still apply. As mentioned in chapter 6 (p. 112), wide scale efforts to redeveloping cities, particularly in urban inner city areas, mean we have been "going to what it was, back to the future where individual store owners owned their

own…where they walked out and swept the sidewalk" (John; Municipal Employee). And though many of the buildings in these neighborhoods are historic, and possess the street-front businesses with apartments above format, newly constructed buildings are adopting this style. Gentrified neighborhoods commonly possess buildings with this layout. Thus, the selection of responsible business owners for the storefront properties is one of the most likely ways to increase neighborhood safety.

Jacobs' (1955; 1956; 1961) early work focused exclusively on independently owned businesses. Today, we now must account for suburbanization, shopping malls, and the presence of franchises. It is possible that corporate policies regarding the functioning of individual businesses could hinder certain place management action that would otherwise be carried out by an independent owner. However, little to no research has studied the differences in place management practices of 'mom and pop' type stores versus large commercial chains.

Yet above all else, Jacobs (1961) was one of the first people to begin exposing the intricate relationship between government and lending agencies, urban renewal policies, and control of neighborhoods through property ownership. Part 3 of *Death and Life* describes how "credit-blacklisting maps" (p. 301) and banking policies—originating from "high-minded social thinkers", particularly within the Federal Housing Administration (p. 310)— inhibited investment within slum areas of cities, even if those who lived there wanted to make improvements. As she describes, "when land is acquired for redevelopment or renewal, it is acquired through the power of eminent domain, a power which belongs only to governments" (p. 311).

Several scholars have since echoed her ideas and argued that government policy—particularly of the Home Owners Loan Corporation (HOLC) and Federal Housing

Administration (FHA)—caused much of the neighborhood decline in inner-city neighborhoods (Jackson, 1985). Despite accounts showing that these deliberate, formal policies encouraged discriminatory racial segregation (Abrams, 1955; Henderson, 2000), they were not deemed unconstitutional until the 1960s (Jackson, 1985). Sadly, many of the same neighborhoods that were once subjected to racial zoning, black-listing, red lining, and the use of restrictive covenants, still experience disproportionately high poverty, blight, and disadvantage (Aaronson, Hartley, & Mazumder, 2017; Rothstein, 2017).

I think an important take-away message from her work that still applies today is that local government and private corporations have immense power to dictate who can own what property and what can be done with it. Thus, moving forward we need to keeping finding ways to encourage redevelopment that is done 'with a conscience'. Leasing property to responsible place managers not only increases the chance of developing vibrant neighborhoods, it decreases the likelihood of crime. So in order for us to understand what gives rise to crime in neighborhoods, we need to consider who owns—and who has authority over—real estate. These are key players who have immense pull and control within neighborhoods. Few works in the criminology literature have explored these influences (for exception, see Eck, 2018b). Research in criminology would benefit from examining how these outward factors contribute to neighborhood crime. I believe Jacobs' next most important contribution to criminology is summarized in one sentence in *Death and Life*. And I can think of no better way to end my dissertation than to let Jane have the last words: "Private investment shapes cities, but social ideas (and laws) shape private investment" (Jacobs, 1961, p. 313).

REFERENCES

Aalbers, M. B. (2006). 'When the banks withdraw, slum lords take over': The structuration of neighborhood decline through redlining, drug dealing, speculation and immigrant exploitation. *Urban Studies, 43*(7), 1061-1086.

Aaronson, D., Hartley, D., & Mazumder, B. (2017, August 3). *The effects of the 1930s HOLC "redlining" maps*. Working Paper WP 2017-12. Chicago, IL: Federal Reserve Bank of Chicago.

Abrams, C. (1955). *Forbidden neighbors: A study in prejudice in housing*. Port Washington, NY: Kennikat Press.

Alonso, J. M., Andrews, R., & Jorda, V. (2019). Do neighbourhood renewal programs reduce crime rates? Evidence from England. *Journal of Urban Economics, 110*, 51-69.

Andresen, M. A. (2014). *Environmental criminology: Evolution, theory, and practice*. New York, NY: Routledge.

Andresen, M.A. (2010). The place of environmental criminology within criminological thought. In M.A. Andresen, P.J. Brantingham & J.B. Kinney (Eds.), *Classics in Environmental Criminology* (pp.5-28). Boca Raton, FL: CRC Press.

Andresen, M. A. (2006). A spatial analysis of crime in Vancouver, British Columbia: A synthesis of social disorganization and routine activity theory. *The Canadian Geographer, 50*(4), 487-502.

Andresen, M. A., Curman, A. S., & Linning, S. J. (2017). The trajectories of crime at places: understanding the patterns of disaggregated crime types. *Journal of Quantitative Criminology*, *33*(3), 427-449.

Andresen, M. A., Linning, S. J., & Malleson, N. (2017). Crime at places and spatial concentrations: exploring the spatial stability of property crime in Vancouver BC, 2003–2013. *Journal of Quantitative Criminology*, *33*(2), 255-275.

Andresen, M. A. & Malleson, N. (2013). Crime seasonality and its variations across space. *Applied Geography, 43*, 25-35.

Andresen, M. A., & Malleson, N. (2011). Testing the stability of crime patterns: implications for theory and policy. *Journal of Research in Crime and Delinquency*, *48*(1), 58-82.

Apgar, W.C., & Calder, A. (2005). The dual mortgage market: The persistence of discrimination in mortgage lending. In X. Briggs (ed.), *Geography of Opportunity: Race and Housing Choice in Metropolitan American* (pp. 101-125). Washington, DC: The Brookings Institution.

Beavon, D. J., Brantingham, P. L., & Brantingham, P. J. (1994). The influence of street networks on the patterning of property offenses. *Crime Prevention Studies*, *2*, 115-148.

Bellair, P. E. (1997). Social interaction and community crime: Examining the importance of neighbor networks. *Criminology*, *35*(4), 677-704.

Bernasco, W., Ruiter, S., & Block, R. (2017). Do street robbery location choices vary over time of day or day of week? A test in Chicago. *Journal of Research in Crime and Delinquency*, *54*(2), 244-275.

Borrion, H., & Koch, D. (2019). Architecture. In R. Wortley, A. Sidebottom, N. Tilley & G. Laycock (eds.), *Routledge Handbook of Crime Science* (pp. 145-166). New York, NY: Routledge.

Bowers, K. (2014). Risky facilities: crime radiators or crime absorbers? A comparison of internal and external levels of theft. *Journal of Quantitative Criminology*, *30*(3), 389-414.

Bowers, K. & Johnson, S. D. (2017). Burglary prevention in practice. In N. Tilley & A. Sidebottom (eds.), *Handbook of Crime Prevention and Community Safety*, 2nd ed. (pp. 319-353). New York, NY: Routledge.

Box, G. E., & Jenkins, G. M. (1976). *Time series analysis: Forecasting and control, (revised ed*.), San Francisco, CA: Holden-Day.

Braga, A. A. (2005). Hot spots policing and crime prevention: A systematic review of randomized controlled trials. *Journal of Experimental Criminology*, *1*(3), 317-342.

Braga, A. A., Papachristos, A. V., & Hureau, D. M. (2014). The effects of hot spots policing on crime: An updated systematic review and meta-analysis. *Justice Quarterly*, *31*(4), 633-663.

Braga, A. A., Papachristos, A. V., & Hureau, D. M. (2010). The concentration and stability of gun violence at micro places in Boston, 1980–2008. *Journal of Quantitative Criminology*, *26*(1), 33-53.

Brantingham, P. J. & Brantingham, P. L. (2001). The implications of the criminal event model for crime prevention. In R. F. Meier, L. W. Kennedy, & V. F. Sacco (eds.), *The Process and Structure of Crime* (pp. 277-304). Transaction Publishers.

Brantingham, P. J., & Brantingham, P. L. (1984). *Patterns in crime*. New York, NY: Macmillan Publishing Company.

Brantingham, P. L., & Brantingham, P. J. (1999). A theoretical model of crime hot spot generation. *Studies on Crime & Crime Prevention, 8*(1), 7-26.

Brantingham, P.L., & Brantingham, P.J. (1995). Criminality of place. *European Journal on Criminal Policy and Research*, *3*(3), 5-26.

Brantingham, P. L., & Brantingham, P. J. (1993). Nodes, paths and edges: Considerations on the complexity of crime and the physical environment. *Journal of Environmental Psychology*, *13*(1), 3-28.

Brantingham, P.L., & Brantingham, P.J. (1981). *Environmental criminology*. Beverly Hills, CA: Sage Publications.

Brantingham, P. J., Brantingham, P. L., & Andresen, M. A. (2017). The geometry of crime and crime pattern theory. In R. Wortley & M. Townsley (eds.), *Environmental Criminology and Crime Analysis, 2nd ed*. (pp. 98-116). New York, NY: Routledge.

Brantingham, P. J., Dyreson, D. A., & Brantingham, P. L. (1976). Crime seen through a cone of resolution. *American Behavioral Scientist*, *20*(2), 261-273.

Brownfield, A. (2019, March). Developer buys Walnut Hills church with eye on event space. *Cincinnati Business Courier*. Retrieved from: https://www.bizjournals.com/cincinnati/news/2019/03/11/exclusive-developer-buys-walnut-hills-church-with.html?ana=e_ae_set1&s=article_du&ed=2019-03-11

Brownfield, A. (2018, November). Here's what Walnut Hills' first craft brewery has in store. *Cincinnati Business Courier*. Retrieved from: https://www.bizjournals.com/cincinnati/news/2018/11/29/heres-what-walnut-hills-first-craft-brewery-has-in.html

Brownfield, A. (2017, November). Entrance to Cincinnati's 'second downtown' begins renovation. *Cincinnati Business Courier*. Retrieved from: https://www.bizjournals.com/cincinnati/news/2017/11/08/entrance-to-cincinnatis-second-downtown-begins.html

Browning, C. R., Byron, R. A., Calder, C. A., Krivo, L. J., Kwan, M. P., Lee, J. Y., & Peterson, R. D. (2010). Commercial density, residential concentration, and crime: Land use patterns and violence in neighborhood context. *Journal of Research in Crime and Delinquency*, *47*(3), 329-357.

Browning, C. R., Calder, C. A., Boettner, B., & Smith, A. (2017). Ecological networks and urban crime: The structure of shared routine activity locations and neighborhood-level informal control capacity. *Criminology, 55*(4), 754-778.

Bullock, K., & Fielding, N. (2017). Community crime prevention. In N. Tilley & A. Sidebottom (eds.), *Handbook of Crime Prevention and Community Safety*, 2nd ed. (pp. 87-108). New York, NY: Routledge.

Burgess, E. W. (1925). The growth of a city. In R.E. Park, E.W. Burgess and R.D. McKenzie (Eds.), *The city* (pp.47-62). Chicago, IL: University of Chicago Press.

Bursik, R. J., (1988). Social disorganization and theories of crime and delinquency: Problems and prospects. *Criminology, 26*, 521-39.

Bursik, R. J. (1986a). Delinquency rates as sources of ecological change. In J.M. Byrne & R.J. Sampson (eds.), *The Social Ecology of Crime* (pp. 63-74). New York, NY: Springer.

Bursik, R. J. (1986b). Ecological stability and the dynamics of delinquency. In A. J. Reiss & M. Tonry (eds). *Communities and Crime* (pp. 35-66). Chicago, IL: University of Chicago Press.

Bursik, R. J., & Grasmick, H. (1993). *Neighborhoods and crime: The dimensions of effective social control*. New York, NY: Lexington.

Byrne, J. M. & Sampson, R. J. (1986). Key issues in the social ecology of crime. In J.M. Byrne & R.J. Sampson (eds.), *The Social Ecology of Crime* (pp. 1-22). New York, NY: Springer.

Caproni, E. (2018, August). Walnut Hills Redevelopment Foundation gets new leader. *Cincinnati Business Courier*. Retrieved from: https://www.bizjournals.com/cincinnati/news/2018/08/13/walnut-hills-redevelopment-foundation-gets-new.html

Carr, P. J. (2003). The new parochialism: The implications of the Beltway case for arguments concerning informal social control. *American Journal of Sociology*, *108*(6), 1249-1291.

Cartwright, N., & Hardie, J. (2012). *Evidence-based policy: A practical way of doing it better*. Oxford, UK: Oxford University Press.

Caspi, A., Houts, R. M., Belsky, D. W., Harrington, H., Hogan, S., Ramrakha, S., ... & Moffitt, T. E. (2017). Childhood forecasting of a small segment of the population with large economic burden. *Nature Human Behaviour*, *1*(5), 1-29.

Chamberlain, A. W., & Hipp, J. R. (2015). It's all relative: Concentrated disadvantage within and across neighborhoods and communities, and the consequences for neighborhood crime. *Journal of Criminal Justice*, *43*(6), 431-443.

Cincinnati CityBeat (2013, February). Qualls urges HUD to stop sale of housing units: More than 700 units being sold to New York company. *Cincinnati CityBeat*. Retrieved from: https://www.citybeat.com/home/blog/13033595/qualls-urges-hud-to-stop-sale-of-housing-units

City of Cincinnati (2018). 2010 Cincinnati statistical neighborhood approximations: Walnut Hills. Retrieved from: https://www.cincinnati-oh.gov/planning/linkservid/B57BF739-E4DE-A321-8E29E1ACF9C3045D/showMeta/0/

City of Cincinnati (2012). Walnut Hills: Statistical neighborhood approximation. Retrieved from the Department of City Planning Statistical Database: https://www.cincinnati-oh.gov/planning/reports-data/census-demographics/

City Planning Commission (1969a). Walnut Hills Community Study: Existing Conditions Study (January 1969). Cincinnati, Ohio: City Planning Commission.

Clarke, R. V. (2004). Technology, criminology and crime science. *European Journal on Criminal Policy and Research*, *10*(1), 55-63.

Clarke, R. V. (1999). *Hot products: Understanding, anticipating and reducing demand for stolen goods*. London, UK: Home Office, Research Development and Statistical Directorate.

Clarke, R. V. (1997). *Situational crime prevention: Successful case studies*. New York, NY: Harrow & Heston Publishers.

Clarke, R. V. (1995). Situational crime prevention. *Crime and Justice, 19*, 91-150.

Clarke, R. V. (1980). Situational crime prevention: Theory and practice. *British Journal of Criminology, 20*, 136-147.

Clarke, R. V., & Bowers, K. J. (2017). Seven misconceptions of situational crime prevention. In N. Tilley & A. Sidebottom (eds.), *Handbook of Crime Prevention and Community Safety* (pp. 109-142). New York, NY: Routledge.

Clarke, R. V., & Cornish, D. B. (1985). Modeling offenders' decisions: A framework for research and policy. *Crime and Justice*, *6*, 147-185.

Clarke, R. V., & Eck, J. E. (2007). *Understanding risky facilities*. Problem-Oriented Guides for Police: Problem-Solving Tools Series, No. 6. US Department of Justice.

Clarke, R. V. & Eck, J. E. (2005). *Crime analysis for problem solvers: In 60 small steps*. US Department of Justice: Center for Problem Oriented Policing.

Clarke, R. V., & Weisburd, D. (1994). Diffusion of crime control benefits: Observations on the reverse of displacement. *Crime Prevention Studies*, *2*, 165-184.

Cloward, R. A. (1959). Illegitimate means, anomie, and deviant behavior. *American Sociological Review*, 164-176.

Cohen, L. E., & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. *American Sociological Review, 44*(4), 588-608.

Community Engagement Steering Committee Equitable Development Working Group (2016). Equitable development principles & scorecard: A tool for communities and planners. Retrieved February 3rd, 2019, from: https://www.metrotransit.org/Data/Sites/1/media/equity/equitable-development-scorecard.pdf

Community Engagement Steering Committee Equitable Development Working Group (2014, June). Twin Cities region: Equitable development principles & scorecard. Retrieved on February 3rd, 2019, from: https://www.mayorsinnovation.org/images/uploads/pdf/5_-_Twin_Cities_Region_Equitable_Development.pdf

Copsey, H. (2018, February). Are city neighborhoods 'beating' The Banks? Some say yes, but The Banks is a neighborhood, too. *WCPO News*. Retrieved from: https://www.wcpo.com/news/insider/are-city-neighborhoods-beating-the-banks-some-say-yes-but-the-banks-is-a-neighborhood-too

Cornish, D. B. & Clarke, R. V. (2017). The rational choice perspective. In R. Wortley & M. Townsley (eds.), *Environmental Criminology and Crime Analysis, 2nd ed*. (pp. 29-61). New York, NY: Routledge.

Cornish, D. B. & Clarke, R. V. (1986). *The reasoning criminal: Rational choice perspectives on offending*. New York, NY: Springer.

Cozens, P. (2008). Crime prevention through environmental design. In R. Wortley & L. Mazerolle (eds.), *Environmental Criminology and Crime Analysis* (1st ed.; pp. 153-177). New York, NY: Routledge.

Cozens, P., & Hillier, D. (2012). Revisiting Jane Jacob's 'eyes on the street' for the twenty-first century: Evidence from environmental criminology. In S. Hart & D. Zahm (eds.), *The Urban Wisdom of Jane Jacobs* (pp. 196-214). New York, NY: Routledge.

Cullen F. T. (2015). Observations on criminological bibliometrics. *The Criminologist, 40*(5), 11-13.

Cullen, F. T. (2011). Beyond adolescence-limited criminology: Choosing our future – The American Society of Criminology 2010 Sutherland Address. *Criminology, 49*(4), 287-330.

Curman, A. S., Andresen, M. A., & Brantingham, P. J. (2015). Crime and place: a longitudinal examination of street segment patterns in Vancouver, BC. *Journal of Quantitative Criminology*, *31*(1), 127-147.

Davies, T., & Johnson, S. D. (2015). Examining the relationship between road structure and burglary risk via quantitative network analysis. *Journal of Quantitative Criminology*, *31*(3), 481-507.

Demeropolis, T. (2019, February). Three retail tenants coming to Paramount Square in Walnut Hills. *Cincinnati Business Courier*. Retrieved from: https://www.bizjournals.com/cincinnati/news/2019/02/07/exclusive-three-retail-tenants-coming-to-paramount.html

Demeropolis, T. (2018, March). Walnut Hills redevelopment leader stepping down. *Cincinnati Business Courier*. Retrieved from: https://www.bizjournals.com/cincinnati/news/2018/03/06/walnut-hills-redevelopment-leader-stepping-down.html

Deryol, R., Wilcox, P., Logan, M., & Wooldredge, J. (2016). Crime places in context: An illustration of the multilevel nature of hot spot development. *Journal of Quantitative Criminology*, *32*(2), 305-325.

Desmond, M. (2016). *Evicted: Poverty and profit in the American city*. New York, NY: Crown.

Dickey, D. A., & Fuller, W. A. (1981). Likelihood ratio statistics for autoregressive time series with a unit root. *Econometrica: Journal of the Econometric Society*, 1057-1072.

Dodd, V. J., Khey, D. N., & Miller, E. M. (2012). Intoxication levels of bar patrons at an organized pub crawl in a college campus community. *American Journal of Criminal Justice*, *37*(2), 246-257.

Eck, J. E. (2018a). The opportunity structure for bad place management: A theory to assist effective regulation of high crime places. In D. Weisburd & J. E. Eck (Eds.), Unraveling the crime-place connection: New directions in theory and policy (pp.157-187). New York, NY: Routledge.

Eck, J.E. (2018b). Race, place management, and crime. In J.D. Unnever, S.L. Gabbidon, & C. Chouhy (eds.), *Building a Black Criminology: Race, Theory, and Crime* (pp. 171-206). New York, NY: Routledge.

Eck, J. E. (2017). Some solutions to the evidence-based crime prevention problem. In J. Knutsson and L. Tompson (eds.), *Advances in Evidence-Based Policing* (pp. 45-63). New York, NY: Routledge.

Eck, J. E. (2010). Policy is in the details: Using external validity to help policy makers. *Criminology & Public Policy*, *9*(4), 859-866.

Eck, J. E. (2006). When is a bologna sandwich better than sex? A defense of small-n case study evaluations. *Journal of Experimental Criminology, 2*, 345-362.

Eck, J. E. (2005). Crime hot spots: What they are, why we have them, and how to map them. In *Mapping Crime: Understanding Hot Spots* (pp. 1-14). U.S. Department of Justice, Office of Justice Programs, National Institute of Justice.

Eck, J. E. (2002). Preventing crime at places. In L. W. Sherman, D. P. Farrington, B. C. Welch, & D. L. Mackenzie (eds.), *Evidence-based crime prevention* (pp. 241-294). New York, NY: Routledge.

Eck, J.E. (1997). Do premise liability suits promote business crime prevention? In R.V. Clarke & M. Felson (eds.), *Business and Crime Prevention* (pp. 125-150). Monsey, NY: Criminal Justice Press.

Eck, J.E. (1994). *Drug markets and drug places: A case-control study of the spatial structure of illicit drug dealing*. Unpublished doctoral dissertation, University of Maryland College Park.

Eck, J. E. (1993). The threat of crime displacement. *Criminal Justice Abstracts, 25*(3), 527-546.

Eck, J. E., Clarke, R. V., & Guerette, R. T. (2007). Risky facilities: Crime concentration in homogeneous sets of establishments and facilities. In G. Farrell, K.J. Bowers, S.D. Johnson, & M. Townsley (eds.), *Imagination for Crime Prevention* (pp. 225-264) Crime Prevention Studies (Vol. 21), Monsey, NY: Criminal Justice Press.

Eck, J. E., Gersh, J. S., & Taylor, C. (2000). Finding crime hot spots through repeat address mapping. In V. Goldsmith, P. G. McGuire, J. H. Mollenkopf, & T. A. Ross (eds.), *Analyzing crime patterns: Frontiers of practice*, (pp. 49-64). Thousand Oaks, CA: Sage.

Eck, J. E., Lee, Y., O, S., & Martinez, N. (2017). Compared to what? Estimating the relative concentration of crime at places using systematic and other reviews. *Crime Science, 6*(8), 1-17.

Eck, J.E., & Madensen, T.D. (2018). Place management. In G.J.N. Bruinsma & S.D. Johnson (eds.), *The Oxford Handbook of Environmental Criminology* (pp. 633-667). New York, NY: Oxford University Press.

Eck, J. E., & Madensen-Herold, T. D. (2018). Place management, guardianship, and the establishment of order. In D. S. Nagin, F. T. Cullen, and C. L. Jonson (eds.), *Deterrence, Choice, and Crime: Contemporary Perspectives* (pp. 269-308). New York, NY: Routledge.

Eck, J. E. & Weisburd, D. (1995). Crime places in crime theory. In J. E. Eck & D. Weisburd (eds.), *Crime and Place* (pp. 1-34), Monsey, NY: Criminal Justice Press.

Ehrenhalt, A. (2009, December). The return of the two-way street: Why the double-yellow stripe is making a comeback in downtowns. *Governing*. Retrieved from: http://www.governing.com/topics/transportation-infrastructure/The-Return-of-the.html

Elliott, D. S., Wilson, W. J., Huizinga, D., Sampson, R. J., Elliott, A., & Rankin, B. (1996). The effects of neighborhood disadvantage on adolescent development. *Journal of Research in Crime and Delinquency*, *33*(4), 389-426.

Fast, A. (2018, January). New mixed-use apartment complex Poste coming to Walnut Hills. *WCPO Cincinnati*. Retrieved from: https://www.wcpo.com/news/local-news/hamilton-county/cincinnati/walnut-hills/new-luxury-apartment-complex-poste-coming-to-walnut-hills-in-2019

Felson, M. (2017). The routine activity approach. In R. Wortley & M. Townsley (eds.), *Environmental Criminology and Crime Analysis* (pp. 87-97). New York, NY: Routledge.

Felson, M. (1995). Those who discourage crime. In J.E. Eck & D. Weisburd (eds.), *Crime and Place* (Vol. 4, pp. 53-66). Monsey, NY: Criminal Justice Press.

Felson, M. (1987). Routine activities and crime prevention in the developing metropolis. *Criminology, 25*, 991-932.

Felson, M. (1986). Linking criminal choices, routine activities, informal control, and criminal outcomes. In D. Cornish & R. V. Clarke (eds.), *The Reasoning Criminal: Rational Choice Perspectives on Offending* (pp. 119-128). New York, NY: Springer-Verlag.

Felson, M., & Clarke, R. V. (1998). Opportunity makes the thief. *Police research series, paper*, *98*.

Felson, M., & Eckert, M.A. (2018). *Introductory criminology: A study of risky situations*. New York, NY: Routledge.

Felson, M., & Eckert, M.A. (2016). *Crime and everyday life* (5th ed.). Thousand Oaks, CA: Sage.

Flint, A. (2009). *Wrestling with Moses: How Jane Jacobs took on New York's master builder and transformed the American city*. New York, NY: Random House.

Gabbidon, S. L. (1996). An argument for including W.E.B. DuBois in the criminology/criminal justice literature. *Journal of Criminal Justice Education*, *7*(1), 99-112.

Galster, G. (1990). Racial segregation in urban housing markets: A review of the audit evidence. *The Review of Black Political Economy, 19*, 105-129.

George, A. L., & Bennett, A. (2005). *Case studies and theory development in the social sciences*. Cambridge, MA: MIT Press

Gerard, D. (2016). *A look at an offender-based crime strategy*. Presented at the University of Cincinnati on March 7th, 2016.

Ghosh, S., Silveria, J., & Erickson, T. (2009). *Walnut Hills: An analysis of current conditions*. Structure and Dynamics of Human Settlements. Retrieved from: https://www.uc.edu/cdc/urban_database/subregional/walnut_hills_analysis.pdf

Giglierano, G. J., Overmyer, D. A., & Propas, F. L. (1988). *The bicentennial guide to greater Cincinnati: A portrait of two hundred years*. Cincinnati, OH: The Cincinnati Historical Society.

Graham, W. (2016). *Dream cities: Seven urban ideas that shape the world*. New York, NY: HarperCollins.

Groff, E. R., & McCord, E. S. (2012). The role of neighborhood parks as crime generators. *Security Journal, 25*, 1-24.

Groff, E. R., Weisburd, D., & Yang, S. M. (2010). Is it important to examine crime trends at a local "micro" level?: A longitudinal analysis of street to street variability in crime trajectories. *Journal of Quantitative Criminology*, *26*(1), 7-32.

Guerette, R. T. (2009). *Analyzing crime displacement and diffusion*. Washington, DC: US Department of Justice, Office of Community Oriented Policing Services.

Guerette, R. T., & Bowers, K. J. (2009). Assessing the extent of crime displacement and diffusion of benefits: A review of situational crime prevention evaluations. *Criminology*, *47*(4), 1331-1368.

Guerry, A.-M. (1933). *Essai sur la statistique morale de la France*. Paris, FR: Crochard.

Harris, R. (2011). The magpie and the bee: Jane Jacobs's magnificent obsession. In M. Page & T. Minnel (eds.), *Reconsidering Jane Jacobs* (pp. 65-84). Chicago, IL: American Planning Association.

Hart, S. & Zahm, D. (2012). *The Urban Wisdom of Jane Jacobs*. New York, NY: Routledge.

Henderson, A. S. (2000). *Housing and the democratic ideal: The life and thought of Charles Abrams*. New York, NY: Columbia University Press.

Hesse-Biber, S. & Leavy, P. (2011). *The practice of qualitative research* (2nd ed.). Thousand Oaks, CA: SAGE Publications, Inc.

Hill, C. D. (1983). Epilogue. In C. D. Hill (ed.), *Walnut Hills City Neighborhood* (The Neighborhood Studies Project of the Cincinnati Historical Society, Cincinnati, Ohio, 1983; pp. 38-45). Cincinnati Historical Society: Cincinnati, Ohio.

Hillier, B. (2004). Can streets be made safe?. *Urban Design International*, *9*(1), 31-45.

Hipp, J. R., Bauer, D. J., Curran, P. J., & Bollen, K. A. (2004). Crimes of opportunity or crimes of emotion? Testing two explanations of seasonal change in crime. *Social Forces, 82*(4), 1333-1372.

Homel, R., Tomsen, S., & Thommeny, J. (1992). Public drinking and violence: Not just an alcohol problem. *Journal of Drug Issues*, *22*(3), 679-697.

Hope, T. (1995). Community Crime Prevention. In M. Tonry & D.P. Farrington (eds.), *Building a Safer Society: Strategic Approaches to Crime Prevention* (pp. 21-90). Chicago, IL: University of Chicago Press.

Hsu, H. Y., & Apel, R. (2015). A situational model of displacement and diffusion following the introduction of airport metal detectors. *Terrorism and Political Violence*, *27*(1), 29-52.

Hunter, A. (1985). Private, parochial, and public social orders: The problem of crime and incivility in urban communities. In G. Suttles and M. Zald (eds.), *The Challenge of Social Control: Citizenship and Institution Building in Modern Society* (pp. 230-242). Norwood, NJ: Ablex.

Hurley, D. (2006). Kenyon Barr Collection: Cincinnati Historical Society Library. *Ohio Valley History, 6*(1), 61-64. Retrieved from: http://rave.ohiolink.edu/ejournals/article/320695401

Hyndman, R.J., and Athanasopoulos, G. (2018). Forecasting: Principles and Practice. Otexts. Available online at: http://OTexts.com/fpp2/

Hyndman, R. J., and Kandakar, Y. (2008). Automatic time series forecasting: The forecast package for R. *Journal of Statistical Software, 27*(1), 1-22.

Isaac, E., Hammer, M. G., Christenson, B. R., & Medensen, T. (2017, June). *Place-based investigations of violent offender territories* (P.I.V.O.T.). Herman Goldstein Award Submission (Winner), Center for Problem-Oriented Policing. Retrieved from: https://popcenter.asu.edu/sites/default/files/17-15.pdf

Jacobs, J. (1981). Can big plans solve the problem of renewal? In S. Zipp & N. Storring (eds.), *Vital Little Plans: The Short Works of Jane Jacobs* (pp. 177-188). New York, NY: Random House.

Jacobs, J. (1961). *The death and life of great American cities*. New York, NY: Vintage.

Jacobs, J. (1958, April). Downtown is for people (First appearance in *Fortune*). In S. Zipp & N. Storring (eds.), *Vital Little Plans: The Short Works of Jane Jacobs* (pp. 85-103). New York, NY: Random House.

Jacobs, J. (1957, March). Our "surplus" land (First appearance in *Architectural Forum*). In S. Zipp & N. Storring (eds.), *Vital Little Plans: The Short Works of Jane Jacobs* (pp. 60-63). New York, NY: Random House.

Jacobs, J. (1956, June). The missing link in city redevelopment. *Architectural Forum: The Magazine of Building, 104*(6), 132-133.

Jacobs, J. (1955, July). Philadelphia's redevelopment: A progress report (First appearance in *Architectural Forum*). In S. Zipp & N. Storring (eds.), *Vital Little Plans: The Short Works of Jane Jacobs* (pp. 44-51). New York, NY: Random House.

Jackson, K. T. (1985). *Crabgrass frontier: The suburbanization of the United States*. New York, NY: Oxford University Press.

Jeffery, C. R. (1971). *Crime prevention through environmental design*. Beverly Hills, CA: Sage Publications.

Jeffery, C. R., & Zahm, D. L. (1993). Crime prevention through environmental design, opportunity theory, and rational choice models. In R.V. Clarke & M. Felson (eds.), *Routine Activity and Rational Choice: Advances in Criminological Theory* (Vol. 5, pp. 323-350). New Brunswick, NJ: Transaction Publishers.

Johnson, S. D., & Bowers, K. J. (2010). Permeability and burglary risk: are cul-de-sacs safer?. *Journal of Quantitative Criminology*, *26*(1), 89-111.

Johnson, S. D., & Bowers, K. J. (2004a). The burglary as clue to the future: The beginnings of prospective hot-spotting. *European Journal of Criminology*, *1*(2), 237-255.

Johnson, S. D., & Bowers, K. J. (2004b). The stability of space-time clusters of burglary. *British Journal of Criminology*, *44*(1), 55-65.

Johnson, S. D., Bernasco, W., Bowers, K. J., Elffers, H., Ratcliffe, J., Rengert, G., & Townsley, M. (2007). Space–time patterns of risk: a cross national assessment of residential burglary victimization. *Journal of Quantitative Criminology*, *23*(3), 201-219.

Johnson, S. D., Summers, L., & Pease, K. (2009). Offender as forager? A direct test of the boost account of victimization. *Journal of Quantitative Criminology*, *25*(2), 181-200.

Johnson, S. D., Tilley, N., & Bowers, K. J. (2015). Introducing EMMIE: an evidence rating scale to encourage mixed-method crime prevention synthesis reviews. *Journal of Experimental Criminology*, *11*(3), 459-473.

Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika, 39*(1), 31-36.

Kanigel, R. (2016). *Eyes on the street: The life of Jane Jacobs*. New York, NY: Penguin Random House LLC.

Kasarda, J. D., & Janowitz, M. (1974). Community attachment in mass society. *American Sociological Review, 39*(3), 328-339.

Klemek, C. (2011). *The transatlantic collapse of urban renewal postwar urbanism from New York to Berlin*. Chicago, IL: The University of Chicago Press.

Koenig, C. (2015, April). Road to redevelopment: Two nonprofits work to rehab neighborhood anchors. *Soapbox Media: Cincinnati*. Retrieved from: http://www.soapboxmedia.com/features/042115-nonprofits-rehabbing-anchors-price-hill-walnut-hills.aspx

Kornhauser, R. R. (1978). *Social sources of delinquency: An appraisal of analytic models*. Chicago, IL: University of Chicago Press.

Krivo, L. J., & Peterson, R. D. (1996). Extremely disadvantaged neighborhoods and urban crime. *Social Forces, 75*(2), 619-648.

Kubrin, C. E., & Weitzer, R. (2003). New directions in social disorganization theory. *Journal of Research in Crime and Delinquency*, *40*(4), 374-402.

Kubrin, C. E. (2009). Social disorganization theory: Then, now, and in the future. In M.D. Krohn, A. J. Lizotte, & G. P. Hall (eds.) *Handbook on Crime and Deviance* (pp. 225-236). Springer, New York, NY.

Kubrin, C. E. & Wo, J. C. (2016). Social disorganization theory's greatest challenge: Linking structural characteristics to crime in socially disorganized communities. In A. Piquero (ed.) *The Handbook of Criminological Theory* (pp. 121-136). Malden, MA: John Wiley & Sons, Inc.

Kwiatkowski, D., Phillips, P. C., Schmidt, P., & Shin, Y. (1992). Testing the null hypothesis of stationarity against the alternative of a unit root: How sure are we that economic time series have a unit root?. *Journal of Econometrics*, *54*(1-3), 159-178.

Lab, S.P. (2016). *Crime prevention: Approaches, practices, and evaluations*. New York, NY: Anderson.

LaFleur, P. (2019, March). Will Liberty Street ever get its 'road diet'. *WCPO Cincinnati*. Retrieved from: https://www.wcpo.com/news/transportation-development/move-up-cincinnati/will-liberty-street-ever-get-its-road-diet

Laurence, J. (2009). The effect of ethnic diversity and community disadvantage on social cohesion: A multi-level analysis of social capital and interethnic relations in UK communities. *European Sociological Review*, *27*(1), 70-89.

LeBeau, J. (2011). Sleeping with strangers: Hotels and motels as crime attractors and crime generators. In M. A. Andresen & J. B. Kinney (eds.), *Patterns, Prevention, and Geometry of Crime* (pp. 77-102). New York, NY: Routledge.

Lee, Y., Eck, J. E., SooHyun, O., & Martinez, N. N. (2017). How concentrated is crime at places? A systematic review from 1970 to 2015. *Crime Science*, *6*(1), 1-16.

Light, J.S. (2009). *The nature of cities: Ecological visions and the American Urban Professions, 1920-1960*. Baltimore, MA: Johns Hopkins University Press.

Linning, S. J. (2015). Crime seasonality and the micro-spatial patterns of property crime in Vancouver, BC and Ottawa, ON. *Journal of Criminal Justice*, *43*(6), 544-555.

Linning, S. J., Andresen, M. A., & Brantingham, P. J. (2017). Crime seasonality: Examining the temporal fluctuations of property crime in cities with varying climates. *International Journal of Offender Therapy and Comparative Criminology*, *61*(16), 1866-1891.

Linning, S. J., Andresen, M. A., Ghaseminejad, A. H., & Brantingham, P. J. (2017). Crime seasonality across multiple jurisdictions in British Columbia, Canada. *Canadian Journal of Criminology and Criminal Justice*, *59*(2), 251-280.

Linning, S. J. and Eck, J. E. (2018). Weak intervention backfire and criminal hormesis: Why some otherwise effective crime prevention interventions can fail at low doses. *British Journal of Criminology, 58*, 309-331.

List, J.A. (2004). The nature and extent of discrimination in the marketplace: Evidence from the field. *Quarterly Journal of Economics, 119*, 49-89.

Madensen, T. D. (2007). *Bar management and crime: Toward a dynamic theory of place management and crime hotspots*. Unpublished doctoral dissertation, University of Cincinnati.

Madensen, T. D., & Eck, J. E. (2012). Crime places and place management. In F. T. Cullen & P. Wilcox (eds.), *The Oxford Handbook of Criminological Theory* (pp. 1-18). Oxford University Press.

Madensen, T. D., & Eck, J. E. (2008). Violence in bars: Exploring the impact of place manager decision-making. *Crime Prevention and Community Safety*, *10*(2), 111-125.

Madensen, T. D., Herold, M. Hammer, M. G., & Christenson, B. R. (2017, April). Place-based investigations to disrupt crime place networks. *The Police Chief, 84*(4), 14-15.

Maguire, E. R., Nix, J., & Campbell, B. A. (2017). A war on cops? The effects of Ferguson on the number of US police officers murdered in the line of duty. *Justice Quarterly*, *34*(5), 739-758.

Massey, D.S., Rugh, J.S., Stiel, J.P., & Albright, L. (2016). Riding the stagecoach to hell: A qualitative analysis of racial discrimination in mortgage lending. *City and Community, 15*, 118-136.

Mawby, R.I. (2017). Defensible space. *Oxford Research Encyclopedia of Criminology*. DOI: 10.1093/acrefore/9780190264079.013.6

Mawby, R.I. (1977). Defensible space: A theoretical and empirical appraisal. *Urban Studies, 14*, 169-179.

Mayhew, P. (1979). Defensible space: The current status of crime prevention theory. *Howard Journal, 17*, 150-159.

Mazerolle, L., Roehl, J., & Kadleck, C. (1998). Controlling social disorder using civil remedies: Results from a randomized field experiment in Oakland, California. In. L. Mazerolle & J. Roehl (eds.), *Crime Prevention Studies (Vol. 9), Civil Remedies and Crime Prevention* (pp. 141-160). Monsey, NY: Criminal Justice Press.

Mazerolle, L., Wickes, R., & McBroom, J. (2010). Community variations in violence: The role of social ties and collective efficacy in comparative context. *Journal of Research in Crime and Delinquency*, *47*(1), 3-30.

McMillen, D., Sarmiento-Barbieri, I., & Singh, R. (2019). Do more eyes on the street reduce crime? Evidence from Chicago's safe passage program. *Journal of Urban Economics, 110*, 1-25.

Merry, S. E. (1981). Defensible space undefended social factors in crime control through environmental design. *Urban Affairs Review*, *16*(4), 397-422.

Merton, R. K. (1938). Social structure and anomie. *American Sociological Review*, *3*(5), 672-682.

Messner, S. F. & Zimmerman, G. M. (2012). Community-level influences on crime and offending. In B. C. Welch & D. P. Farrington (eds.), *The Oxford Handbook of Crime Prevention* (pp. 155-174). Oxford University Press.

Miller, M. (2019, February). UC grads spur big changes in Walnut Hills. *UC News*. Retrieved from: https://www.uc.edu/news/articles/2019/01/n2064167.html

Mitchell, M. (2017, September). Historic Walnut Hills building to begin renovations. *WLWT News*. Retrieved from: https://www.wlwt.com/article/historic-walnut-hills-building-to-begin-renovations/12255456

Moffitt, T. E. (1993). Adolescent-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review, 100*(4), 674-701.

Monk, K. M. (2012). *How central business districts manage crime and disorder: A case study in the process of place management in downtown Cincinnati.* Unpublished PhD Dissertation. Cincinnati, OH: University of Cincinnati.

Moskowitz, P. (2018). *How to kill a city: Gentrification, Inequality, and the fight for the neighborhood*. New York, NY: Nation Books.

Nau, R. (2018). Statistical forecasting: Notes on regression and time series analysis. Retrieved from: https://people.duke.edu/~rnau/411home.htm

Newman, O. (1996). *Creating defensible space*. U.S. Department of Housing and Urban Development; Office of Police Development Research. Rutgers University.

Newman, O. (1973). *Defensible space: Crime prevention through urban design.* New York, NY: MacMillan Publishing.

Newton, A., & Felson, M. (2015). Crime patterns in time and space: The dynamics of crime opportunities in Urban areas. *Crime Science*, *4*(11), 1-5.

Newton, A., & Hirschfield, A. (2009). Measuring violence in and around licensed premises: The need for a better evidence base. *Crime Prevention and Community Safety*, *11*(3), 171-188.

Osgood, D. W., & Chambers, J. M. (2000). Social disorganization outside the metropolis: An analysis of rural youth violence. *Criminology*, *38*(1), 81-116.

Page, M. (2011). Introduction: More than meets the eye. In M. Page & T. Mennel (eds.), *Reconsidering Jane Jacobs* (pp. 3-14). Chicago, IL: American Planning Association.

Park, R.E., & Burgess, E. W. (1925). The growth of a city: An introduction to a research project. In R.E. Park, E.W. Burgess and R.D. McKenzie (Eds.), *The city* (pp.47-62). Chicago, IL: University of Chicago Press.

Pattillo, M. E. (1998). Sweet mothers and gangbangers: Managing crime in a black middle-class neighborhood. *Social Forces*, *76*(3), 747-774.

Perkins, D. D., Meeks, J. W., & Taylor, R. B. (1992). The physical environment of street blocks and resident perceptions of crime and disorder: Implications for theory and measurement. *Journal of Environmental Psychology, 12*, 21-34.

Phillips, P. C., & Perron, P. (1988). Testing for a unit root in time series regression. *Biometrika*, *75*(2), 335-346.

Popper, K. R. (1992). *Conjectures and refutations: The growth of scientific knowledge*. New York, NY: Routledge.

Pratt, T. C. (2016). Theory testing in criminology. In A. Piquero (ed.), *The Handbook of Criminological Theory* (pp. 37-49). Malden, MA: John Wiley & Sons, Inc.

Pratt, T. C., & Cullen, F. T. (2005). Assessing macro-level predictors and theories of crime: A meta-analysis. *Crime and Justice*, *32*, 373-450.

Quetelet, L.A.J. (1842). A treatise on man and the development of his faculties (pp.82-96). Trans. Dr. R. Know, FRSE. Edinburgh: W. and R. Chambers. In M.A. Andresen, P.J. Brantingham & J.B. Kinney (Eds.), *Classics in environmental criminology* (pp.29-75). Boca Raton, FL: CRC Press.

Ranasinghe, P. (2011). Jane Jacobs' framing of public disorder and its relation to the 'broken windows' theory. *Theoretical Criminology, 16*(1), 63-84.

Reppetto, T. A. (1976). Crime prevention and the displacement phenomena. *Crime and Delinquency, 22*(2), 166-177.

Reynald, D. M., & Elffers, H. (2009). The future of Newman's defensible space theory: Linking defensible space and the routine activities of place. *European Journal of Criminology*, *6*(1), 25-46.

Rogers, A. (2018a, June). Major projects in Walnut Hills aim to maintain neighborhood's integrity. *WLWT5 News Cincinnati*. Retrieved from: https://www.wlwt.com/article/major-projects-in-walnut-hills-aim-to-maintain-neighborhoods-integrity/21938640

Rogers, A. (2018b, July). Affordable housing for single parents coming to Walnut Hills. *WLWT5 News Cincinnati*. Retrieved from: https://www.wlwt.com/article/affordable-housing-for-single-parents-coming-to-walnut-hills/22117727

Rosenbaum, D. P. & Schuck, A., M. (2012). Comprehensive community partnerships for preventing crime. In B. C. Welch & D. P. Farrington (eds.), *The Oxford Handbook of Crime Prevention* (pp. 226-246). Oxford University Press.

Rothstein, R. (2017). *The color of law: A forgotten history of how our government segregated America.* New York, NY: Liveright Publishing.

Salins, P.D. (1980). *The ecology of housing destruction: Economic effects of public intervention in the housing market*. New York, NY: New York University Press.

Sampson, R., Eck, J. E., & Dunham, J. (2010). Super controllers and crime prevention: A routine activity explanation of crime prevention success and failure. *Security Journal*, *23*(1), 37-51.

Sampson, R. J. (2012). *Great American city: Chicago and the enduring neighborhood effect.* Chicago, IL: The University of Chicago Press.

Sampson, R. J. (2006). Collective efficacy theory: Lessons learned and directions for future research. In Francis T. Cullen, John Paul Wright, and Kristie R. Blevins (eds.), *Taking Stock: The Status of Criminological Theory – Advances in Criminological Theory, Vol. 15*. New Brunswick, NJ: Transaction.

Sampson, R. J. (2002). Transcending tradition: New direction in community research, Chicago style. *Criminology, 40*, 213-230.

Sampson, R. J. (1986). Crime in cities: The effects of formal and informal social control. *Crime and Justice*, *8*, 271-311.

Sampson, R. J., & Groves, W. B. (1989). Community structure and crime: Testing social-disorganization theory. *American Journal of Sociology*, *94*(4), 774-802.

Sampson, R. J., Morenoff, J. D., & Raudenbush, S. (2005). Social anatomy of racial and ethnic disparities in violence. *American Journal of Public Health*, *95*(2), 224-232.

Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*, *277*(5328), 918-924.

Sampson, R. J., & Wilson, W. J. (1995). Toward a theory of race, crime and urban inequality. In J. Hagan & R. D. Peterson (eds.), *Crime & Inequality* (pp. 37-54). Stanford, CA: Stanford University Press.

Sampson, R. J., & Wooldredge, J. D. (1987). Linking the micro-and macro-level dimensions of lifestyle-routine activity and opportunity models of predatory victimization. *Journal of Quantitative Criminology*, *3*(4), 371-393.

Schubert, D. (2014). Contemporary perspectives on Jane Jacobs: Reassessing the impacts of an urban visionary. New York, NY: Routledge.

Shaw, C. R., & McKay, H. D. (1942). *Juvenile delinquency in urban areas*. Chicago, IL: University of Chicago Press.

Sherman, L. W. (1990). Police crackdowns: Initial and residual deterrence. *Crime and Justice*, *12*, 1-48.

Sherman, L. W., Gartin, P. R., & Buerger, M. E. (1989). Hot spots of predatory crime: Routine activities and the criminology of place. *Criminology*, *27*(1), 27-56.

Sherman, L. W., & Weisburd, D. (1995). General deterrent effects of police patrol in crime "hot spots": A randomized, controlled trial. *Justice quarterly*, *12*(4), 625-648.

Sidebottom, A. & Wortley, R. (2016). Environmental criminology. In A. Piquero (ed.), *The Handbook of Criminological Theory* (pp. 156-181). John Wiley & Sons, Inc.

Silver, E., & Miller, L. L. (2004). Sources of informal social control in Chicago neighborhoods. *Criminology*, *42*(3), 551-584.

Simes, R. A. (2015, March 9). Designs for two-way street conversion in East Walnut Hills nearly complete. *Urban Cincy*. Retrieved from: http://www.urbancincy.com/2015/03/designs-for-two-way-street-conversion-in-east-walnut-hills-nearly-complete/

Simpson, E. H. (1949). Measurement of diversity. *Nature, 163*(4148), 688-689.

Skogan, W. (1990). *Disorder and decline: Crime and the spiral of decay in American neighborhoods*. New York, NY: The Free Press.

Smith, L. (2019, March). Walnut Hills wants development, but not at the cost of its residential neighborhoods. *WCPO Cincinnati*. Retrieved from: https://www.wcpo.com/news/transportation-development/move-up-cincinnati/walnut-hills-wants-development-but-not-at-the-cost-of-its-residential-neighborhoods

Smith, M. J. & Clarke, R. V. (2012). Situational crime prevention: Classifying techniques using "good enough" theory. In B. C. Welch & D. P. Farrington (eds.), *The Oxford Handbook of Crime Prevention* (pp. 291-315). Oxford University Press.

Smith, M. J., Clarke, R. V., & Pease, K. (2002). Anticipatory benefits in crime prevention. *Crime Prevention Studies*, *13*, 71-88.

Smith, W. R., Frazee, S. G., & Davison, E. L. (2000). Furthering the integration of routine activity and social disorganization theories: Small units of analysis and the study of street robbery as a diffusion process. *Criminology*, *38*(2), 489-524.

Smith-Randolph, W. (2018, November). *New life coming to historic Walnut Hills hotel as landmark designation sought*. Local 12 Cincinnati. Retrieved from: https://local12.com/news/local/new-life-coming-to-historic-walnut-hills-hotel-as-landmark-designation-sought

Snodgrass, J. (1976). Clifford R. Shaw and Henry D. McKay: Chicago criminologists. *The British Journal of Criminology*, *16*(1), 1-19.

Stark, R. (1987). Deviant places: A theory of the ecology of crime. *Criminology*, *25*(4), 893-910.

Sternlieb, G. (1966). *The tenement landlord*. New Brunswick, NJ: Rutgers University Press.

Summers, L., & Johnson, S. D. (2017). Does the configuration of the street network influence where outdoor serious violence takes place? Using space syntax to test crime pattern theory. *Journal of Quantitative Criminology*, *33*(2), 397-420.

Tanford, S., Montgomery, R., & Hertzman, J. (2012). Towards a model of wine event loyalty. *Journal of Convention & Event Tourism, 13*(2), 77-99.

Taylor, R. B. (2015). *Community criminology: Fundamentals of spatial and temporal scaling, ecological indicators, and selectivity bias*. NYU Press.

Taylor, R. B., & Gottfredson, S. D. (1986). Environmental design, crime, and prevention: An examination of community dynamics. *Crime and Justice, 8*, 387-416.

Taylor, R. B., Gottfredson, S. D., & Brower, S. (1981). Territorial cognitions and social climate in urban neighborhoods. *Basic and Applied Social Psychology, 2*(4), 289-303.

Taylor, R. B., & Harrell, A. (1996). *Physical environment and crime*. US Department of Justice, Office of Justice Programs, National Institute of Justice.

Taylor, R. B., Koons, B. A., Kurtz, E. M., Greene, J. R., & Perkins, D. D. (1995). Street blocks with more nonresidential land use have more physical deterioration: Evidence from Baltimore and Philadelphia. *Urban Affairs Review, 31*(1), 120-136.

Teaford, J. (1990). *The rough road to renaissance: Urban revitalization in America, 1940-1985*. Baltimore, MD: Johns Hopkins University Press.

Tonry, M. & Farrington, D.P. (1995). Strategic approaches to crime prevention. In M. Tonry & D.P. Farrington (eds.), *Building a Safer Society: Strategic Approaches to Crime Prevention* (pp. 1-20). Chicago, IL: University of Chicago Press.

Townsley, M., Homel, R., & Chaseling, J. (2003). Infectious burglaries. A test of the near repeat hypothesis. *British Journal of Criminology*, *43*(3), 615-633.

Townsley, M., Reid, S., Reynald, D., Rynne, J., & Hutchins, B. (2014). *Risky facilities: Analysis of crime concentration in high-rise buildings*. Canberra: Australian Institute of Criminology.

Trickett, A., Ellingworth, D., Hope, T., & Pease, K. (1995). Crime victimization in the eighties: Changes in area and regional inequality. *The British Journal of Criminology*, 343-359.

Trickett, A., Osborn, D. R., Seymour, J., & Pease, K. (1992). What is different about high crime areas? *The British Journal of Criminology*, *32*(1), 81-89.

Tweh, B. (2016). $10M Walnut Hills development ready to open. The Enquirer: Cincinnati. Retrieved from: https://www.cincinnati.com/story/money/2016/01/15/walnut-hills-trevarren-flats/77763278/

US Small Business Administration Office (2018, August). *Frequently asked questions about small business*. Retrieved from:

https://www.sba.gov/sites/default/files/advocacy/Frequently-Asked-Questions-Small-Business-2018.pdf

Velez, M. B., Lyons, C. J., & Boursaw, B. (2012). Neighborhood housing investments and violent crime in Seattle, 1981–2007. *Criminology*, *50*(4), 1025-1056.

Vélez, M. B., & Richardson, K. (2012). The political economy of neighbourhood homicide in Chicago: The role of bank investment. *The British Journal of Criminology*, *52*(3), 490-513.

Veysey, B. M., & Messner, S. F. (1999). Further testing of social disorganization theory: An elaboration of Sampson and Groves's "community structure and crime". *Journal of Research in Crime and Delinquency*, *36*(2), 156-174.

Villamil, J. C. (2010). How do agglomeration economies affect the development of cities. *Revista de Economía del Caribe*, (6), 95-112.

Walnut Hills Redevelopment Foundation (2016). Walnut Hills Reinvestment Plan. Retrieved from: https://www.dropbox.com/s/3zcj80nkk43fii3/c15702RptBook161101finalx3.pdf?dl=0

Walnut Hills Redevelopment Foundation (n.d.). Equitable development scorecard. Retrieved on February 3rd, 2019, from: https://walnuthillsrf.org/equitable-development-scorecard/

Warner, B. D., & Pierce, G. L. (1993). Reexamining social disorganization theory using calls to the police as a measure of crime. *Criminology, 31*(4), 493-517.

Warner, B. D., & Wilcox Rountree, P. (1997). Local social ties in a community and crime model: Questioning the systemic nature of informal social control. *Social Problems*, *44*(4), 520-536.

WCPO (2016, December). Walnut Hills Kroger closing in March, company confirms. *WCPO Cincinnati*. Retrieved from: https://www.wcpo.com/news/local-news/hamilton-county/cincinnati/walnut-hills/walnut-hills-kroger-closing-company-confirms

Weisburd, D. (2015). The law of crime concentration and the criminology of place. *Criminology*, *53*(2), 133-157.

Weisburd, D., Bushway, S., Lum, C., & Yang, S. M. (2004). Trajectories of crime at places: A longitudinal study of street segments in the city of Seattle. *Criminology*, *42*(2), 283-322.

Weisburd, D., Eck, J.E., Braga, A.A., Telep, C.W., Cave, B., Bowers, K.J., Bruinsma, G., Gill, C., Groff, E.R., Hinkle, J., Hibdon, J., Johnson, S., Lawton, B., Lum, C., Ratcliffe, J., Rengert, G., Taniguchi, T., & Yang, S. (2016). *Place matters: Criminology for the twenty-first century*. New York, NY: Cambridge University Press.

Weisburd, D., Groff, E. R., & Yang, S. M. (2012). *The criminology of place: Street segments and our understanding of the crime problem*. New York, NY: Oxford University Press.

Weisburd, D., Shay, M., Amram, S., & Zamir, R. (2018). The relationship between social disorganization and crime at the micro-geographic level: Findings from Tel Aviv-Yafo using Israeli Census Data. In D. Weisburd & J. E. Eck (Eds.), Unraveling the crime-place connection: New directions in theory and policy (pp. 97-119). New York, NY: Routledge.

Weisburd, D., Wyckoff, L. A., Ready, J., Eck, J. E., Hinkle, J. C., & Gajewski, F. (2006). Does crime just move around the corner? A controlled study of spatial displacement and diffusion of crime control benefits. *Criminology*, *44*(3), 549-592.

Wekerle, G. (2000). From eyes on the street to safe cities. *Places, 13*(1), 44-49.

Wilcox, P., Cullen, F.T., & Feldmeyer, B. (2018). *Communities and crime: An enduring American challenge*. Philadelphia, PA: Temple University Press.

Wilcox, P., & Eck, J. E. (2011). Criminology of the unpopular. *Criminology & Public Policy*, *10*(2), 473-482.

Wilcox, R., Land, K. C., & Hunt, S. A. (2003). *Criminal circumstances: A dynamic multi-contextual criminal opportunity theory*. New York, NY: Aldine de Gruyter.

Wilcox Rountree, P., Land, K. C., & Miethe, T. D. (1994). Macro-micro integration in the study of victimization: A hierarchical logistic model analysis across Seattle neighborhoods. *Criminology*, *32*(3), 387-414.

Wilcox, P., Madensen, T. D., & Tillyer, M. S. (2007). Guardianship in context: Implications for burglary victimization risk and prevention. *Criminology*, *45*(4), 771-803.

Wilcox, P., Quisenberry, N., Cabrera, D. T., & Jones, S. (2004). Busy places and broken windows? Toward defining the role of physical structure and process in community crime models. *The Sociological Quarterly, 45*(2), 185-207.

Wilcox, P., & Swartz, K. (2018). Social spatial influences. In G. J. N. Bruinsma & S. D. Johnson (eds.), *Oxford Handbook of Environmental Criminology* (pp. 35-57). New York, NY: Oxford University Press.

Wilcox, P., & Tillyer, M. S. (2018). Place and neighborhood contexts. In D. Weisburd & J. E. Eck (Eds.), Unraveling the crime-place connection: New directions in theory and policy (pp.121-142). New York, NY: Routledge.

Wilcox Rountree, P. W., & Warner, B. D. (1999). Social ties and crime: Is the relationship gendered? *Criminology*, *37*(4), 789-814.

Wilson, W.J. (1987). *The truly disadvantaged: The inner city, the underclass, and public policy* (2nd edition). Chicago, IL: University of Chicago Press.

Wooldridge, J. M. (2009). *Introductory econometrics: A modern approach (4th ed.).* Mason, OH: South-Western Cengage Learning.

Wortley, R. & Townsley, M. (2017). Environmental criminology and crime analysis: Situating the theory, analytic approach and application. In R. Wortley & M. Townsley (eds.), *Environmental Criminology and Crime Analysis* (pp. 1-25). New York, NY: Routledge.

Wright, E. M., & Benson, M. L. (2011). Clarifying the effects of neighborhood context on violence "Behind Closed Doors". *Justice Quarterly*, *28*(5), 775-798.

Wright, K. (2018). Experience: Executive Director, Walnut Hills Redevelopment Foundation. Retrieved from: https://www.linkedin.com/in/jkevinwright

Wright, K. & Nickol, J. (2016). *The neighborhood playbook: Activating spaces, developing places*. Covington, KY: Yard & Company.

Wright, R. T., & Decker, S. H. (1997). *Armed robbers in action: Stickups and street culture*. Northeastern University Press.

Zipp, S. & Storring, N. (2017). Part two: City building, 1952-1965. In S. Zipp & N. Storring (eds.), *Vital Little Plans: The Short Works of Jane Jacobs* (pp. 37-43). New York, NY: Random House.

Appendix A. Institutional Review Board Approval

Institutional Review Board - Federalwide Assurance #00003152

University of Cincinnati

Date: 1/26/2018

From: UC IRB

To: Principal Investigator: Shannon Linning
CECH Educ Criminal Justice & Human Srvcs

Re: Study ID: 2018-0267
Study Title: Place management and neighborhood change

The Institutional Review Board (IRB) acknowledges receipt of the above referenced proposal. It was determined that this proposal does not meet the regulatory criteria for research involving human subjects (see below): No human subjects – analysis of publicly available data and factual interviews about businesses. Ongoing IRB oversight is not required.

Please note the following requirements:

Statement regarding International conference on Harmonization and Good clinical Practices. The Institutional Review Board is duly constituted (fulfilling FDA requirements for diversity), has written procedures for initial and continuing review of clinical trials: prepares written minutes of convened meetings and retains records pertaining to the review and approval process; all in compliance with requirements defined in 21 CFR Parts 50, 56 and 312 Code of Federal Regulations. This institution is in compliance with the ICH GCP as adopted by FDA/DHHS.

Thank you for your cooperation during the review process.

---

45 CRF § 46.102(d): Research means a systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge.

45 CRF § 46.102(f): Human subject means a living individual about whom an investigator (whether professional or student) conducting research obtains:

1. data through intervention or interaction with the individual, or
2. identifiable private information.

Intervention includes both physical procedures by which data are gathered (for example, venipuncture) and manipulations of the subject or the subject's environment that are performed for research purposes.

Interaction includes communication or interpersonal contact between investigator and subject.

Private information includes information about behavior that occurs in a context in which an individual can reasonably expect that no observation or recording is taking place, and information

which has been provided for specific purposes by an individual and which the individual can reasonably expect will not be made public (for example, a medical record). Private information must be individually identifiable (i.e., the identity of the subject is or may readily be ascertained by the investigator or associated with the information) in order for obtaining the information to constitute research involving human subjects.

FDA regulations apply whenever an individual is or becomes a participant in research, either as a recipient of a FDA-regulated product or as a control, and as directed by a research protocol and not by medical practice. FDA-regulated activities involve individuals, specimens, or data, as patients or healthy controls, in any of the following:

a. any use of a drug or biologic, other than the use of an approved drug or biologic in the course of medical practice
b. any use of a device (medical or other devices, approved or investigational) to test the safety or effectiveness of the device
c. any use of dietary supplements to cure, treat, or prevent a disease or bear a nutrient content claim or other health claim
d. the collection of data or other results from individuals that will be submitted to, or held for inspection by, the FDA as part of an application for a research or marketing permit (including foods, infant formulas, food and color additives, drugs for human use, medical devices for human use, biological products for human use, and electronic products.)
e. activities where specimens (of any type) from individuals, regardless of whether specimens are identifiable, are used to test the safety or effectiveness of any device (medical or other devices, approved or investigational) and the information is being submitted to, or held for inspection by, the FDA.

Appendix B. Sample Interview Guide

Guide for interview with a business owner who leases but does not own property being used:

1. What is the nature of this business?
2. How long has this business been open?
3. Why did you open the business in Walnut Hills (as opposed to elsewhere)?
4. Are you familiar with the Walnut Hills Redevelopment Foundation?
    a. If yes, how do you think their work has impacted the WH neighborhood?
5. Did the owner impose any kind of conditions on your business operation?
6. Have you noticed any ways that Walnut Hills has changed since the business opened?
7. What is your relationship like with [adjacent business owners]?
8. Are you a resident of Walnut Hills?
9. What are the business' operating hours?
    a. Why were these hours chosen?
10. What influenced the physical layout of the business?
    a. Did you have any say in how the property was renovated?
11. What steps have been taken to reduce/prevent crime at or around this business?
12. Are there any specific rules of conduct that your patrons are asked to abide by?
    a. If yes, how are these rules communicated to them?
        i. e.g., terms in their lease?
    b. How does this business deal with people who break those rules?
13. With respect to crime, how do you perceive levels in Walnut Hills?
    a. How (if at all) do you think this has changed (past or present)?
    b. If change, why do you think crime has changed?
14. Is there anything else that you would like to say about the business's experiences in Walnut Hills in general?

Appendix C. ARIMA (0,0,1) analysis of each changed place on logged neighborhood crime.

Model	Place Changed	Classification	Estimate (S.E.)	z-value	Constant	Moving Average [Lag=1] (S.E.)	Log Likelihood	Sigma Squared	AIC
1	Boom Boom Night Club	Hotspot Removed	-0.388*** (0.038)	-10.286	4.459*** (0.028)	0.275*** (0.064)	35.22	0.04	-62.44
2	Frog Da Great's	Hotspot Removed	-0.379*** (0.042)	-8.949	4.385*** (0.025)	0.324*** (0.061)	28.95	0.04	-49.90
3	Red Point Market/Sengam Auto	Hotspot Removed	-0.338*** (0.051)	-6.558	4.337*** (0.026)	0.367*** (0.059)	16.57	0.05	-25.13
4	Dollar Store	Hotspot Removed	-0.312*** (0.063)	-4.956	4.308*** (0.027)	0.426*** (0.056)	9.92	0.05	-11.84
5	St. James Cut	Hotspot Removed	-0.280*** (0.066)	-4.26	4.298*** (0.027)	0.414*** (0.055)	6.88	0.05	-5.76
6	Fireside Pizza	Place Added	-0.350*** (0.056)	-6.278	4.324*** (0.025)	0.375*** (0.058)	15.33	0.05	-22.65
7	Five Points Alley	Place Added	-0.286*** (0.068)	-4.216	4.295*** (0.027)	0.419*** (0.055)	6.77	0.05	-5.55
8	Greenman Park	Place Added	-0.284*** (0.069)	-4.101	4.293*** (0.027)	0.422*** (0.055)	6.38	0.05	-4.75
9	Trevarren/Hauck/Dominig	Place Added	-0.285*** (0.071)	-4.046	4.292*** (0.027)	0.425*** (0.055)	6.20	0.05	-4.39
10	Gomez	Place Added	-0.114 (0.121)	-0.938	4.257*** (0.027)	0.449*** (0.054)	-1.05	0.06	10.11

† $p < 0.10$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; # of crimes: 13,160

Appendix D. Time series analysis of removed places on logged neighborhood crime.

Month of Change	Variable	ARIMA (0,0,1) Estimate	ARIMA (0,0,1) Standard Error	ARIMA (0,0,1) z-value	ARIMA (0,1,2) Estimate	ARIMA (0,1,2) Standard Error	ARIMA (0,1,2) z-value
(01/2009)	Boom Boom Night Club	-0.264***	0.048	-5.471	-0.264***	0.049	-5.438
(10/2011)	Frog Da Greats	-0.163*	0.068	-2.377	-0.163*	0.069	-2.368
(04/2013)	Red Point Market/ Sengam Auto Repair	-0.054	0.085	-0.640	-0.054	0.086	-0.628
(05/2014)	Dollar Store	-0.061	0.143	-0.425	-0.062	0.143	-0.434
(08/2014)	St. James Cut	0.092	0.134	0.688	0.094	0.135	0.694
Model Statistics							
	Moving Average (Lag = 1)	0.238***	0.693	3.436	-0.758***	0.071	-10.667
	Moving Average (Lag = 2)				-0.242***	0.069	-3.490
	Constant	4.460***	0.026	173.02			
	Log Likelihood	42.28			39.16		
	Sigma Squared	0.037			0.037		
	AIC	-68.55			-62.32		

† p < 0.10; * p < 0.05; ** p < 0.01; *** p < 0.001; # of crimes: 13,160

Appendix E. Time series analysis of added places on logged neighborhood crime.

Month of Change	Variable	ARIMA (0,0,1) Estimate	ARIMA (0,0,1) Standard Error	ARIMA (0,0,1) z-value	ARIMA (0,1,2) Estimate	ARIMA (0,1,2) Standard Error	ARIMA (0,1,2) z-value
(12/2013)	Fireside Pizza	-0.425***	0.096	-4.447	-0.180†	0.112	-1.609
(05/2014)	Five Points Alley	0.082	0.230	0.358	0.073	0.202	0.359
(11/2014)	Greenman Park	0.040	0.249	0.161	0.051	0.239	0.215
(12/2014)	Trevarren/Hauck/Dominig	-0.742	0.227	-0.328	-0.086	0.200	-0.428
(05/2016)	Gomez	0.170	0.123	1.384	0.159	0.116	1.370
Model Statistics							
	Moving Average (Lag = 1)	0.371***	0.059	6.284	-0.684***	0.070	-9.725
	Moving Average (Lag = 2)				-0.187**	0.069	-2.719
	Constant	4.324***	0.025	171.579			
	Log Likelihood	16.75			33.67		
	Sigma Squared	0.049			0.040		
	AIC	-17.49			-51.35		

† p < 0.10; * p < 0.05; ** p < 0.01; *** p < 0.001; N = 13,160

Appendix F. Times series analysis of aggregate redevelopment on logged neighborhood crime.

Variable	Model 1 ARIMA (0,0,1)		Model 2 ARIMA (0,0,1)		Model 3 ARIMA (0,1,2)		Model 4 ARIMA (0,1,2)	
	Estimate (S.E.)	z-value	Estimate (S.E.)	z-value	Estimate (S.E.)	z-value	Estimate (S.E.)	z-value
Aggregate Redevelopment	-0.382*** (0.047)	-8.088	-0.201*** (0.047)	-4.302	-0.237* (0.104)	-2.286	-0.201*** (0.047)	-4.280
First Hotspot Removed			-0.287*** (0.042)	-6.939			-0.288*** (0.042)	-6.899
Model Statistics								
Moving Average (Lag = 1)	0.333*** (0.060)	5.516	0.215** (0.068)	3.140	-0.690*** (0.069)	-9.982	-0.782*** (0.070)	-11.138
Moving Average (Lag = 2)					-0.187** (0.679)	-2.765	-0.218** (0.068)	-3.196
Constant	4.354*** (0.024)	177.798	4.460*** (0.025)	177.634				
Log Likelihood	24.07		43.6		33.88		40.46	
Sigma Squared	0.045		0.036		0.040		0.036	
AIC	-40.15		-77.20		-59.75		-70.92	

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; N = 13,160

Appendix G. Property crime per neighborhood, Cincinnati, OH, 2010

Neighborhood	# of Places	Population	Property Crime					
			All Calls	All Calls Rank (Most to Least)	Crime Rate (per 1,000 people)	Crime Rate Rank (Most to Least)	Crime Rate (per 100 places)	Crime Place Rate Rank (Most to Least)
Avondale	4346	12466	915	6	73.40	25	21.05	10
Bond Hill	3096	6972	287	22	41.16	44	9.27	41
California	602	469	37	49	78.89	19	6.15	47
Camp Washington	1020	1343	236	26	175.73	4	23.14	7
Carthage	1324	2733	231	27	84.52	17	17.45	21
Clifton	2588	8304	410	17	49.37	39	15.84	24
College Hill	5560	14133	597	10	42.24	43	10.74	38
Columbia Tusculum	829	1304	50	48	38.34	45	6.03	48
Corryville	1171	3327	374	18	112.41	11	31.94	3
CUF	4201	16989	1085	5	63.86	31	25.83	5
Downtown	2498	4850	1168	4	240.82	2	46.76	1
East End	1635	1518	211	32	139.00	7	12.91	34
East Price Hill	6235	15340	1302	3	84.88	16	20.88	11
East Walnut Hills	2029	3794	196	34	51.66	38	9.66	40
East Westwood	775	2445	132	40	53.99	35	17.03	23
English Woods	141	405	27	50	66.67	28	19.15	16
Evanston	3361	9158	424	16	46.30	42	12.62	35
Hartwell	2057	4640	229	28	49.35	40	11.13	36
Hyde Park	5550	13356	344	19	25.76	48	6.20	46
Kennedy Heights	2022	4847	120	42	24.76	49	5.93	49
Linwood	899	875	172	37	196.57	3	19.13	17
Lower Price Hill	848	1075	162	38	150.70	5	19.10	18
Madisonville	4355	9141	480	13	52.51	37	11.02	37
Millvale	931	2399	188	35	78.37	20	20.19	13
Mt. Adams	913	1481	70	46	47.27	41	7.67	42
Mt. Airy	2558	8779	510	12	58.09	33	19.94	14
Mt. Auburn	2471	4904	320	20	65.25	30	12.95	33
Mt. Lookout	2096	4814	104	44	21.60	50	4.96	50
Mt. Washington	4602	11711	306	21	26.13	47	6.65	45
North Avondale - Paddock Hills	1651	4188	221	29	52.77	36	13.39	31
North Fairmount	1593	1812	111	43	61.26	32	6.97	44
Northside	4305	7467	581	11	77.81	21	13.50	30
Oakley	4668	10429	734	7	70.38	27	15.72	25
Over-the-Rhine	3163	6064	679	8	111.97	12	21.47	9

Pendleton	443	900	128	41	142.22	6	28.89	4
Pleasant Ridge	3406	8083	255	25	31.55	46	7.49	43
Queensgate	454	142	157	39	1105.63	1	34.58	2
Riverside	1432	2340	221	30	94.44	14	15.43	26
Roselawn	2186	6440	480	14	74.53	24	21.96	8
Sayler Park	1385	2765	200	33	72.33	26	14.44	28
Sedamsville	499	680	77	45	113.24	10	15.43	27
South Cumminsville	655	801	66	47	82.40	18	10.08	39
South Fairmount	1448	2368	273	24	115.29	9	18.85	19
Spring Grove Village	1035	1964	178	36	90.63	15	17.20	22
Villages at Roll Hill	1194	1916	221	31	115.34	8	18.51	20
Walnut Hills	3305	6495	642	9	98.85	13	19.43	15
West End	3312	6627	440	15	66.40	29	13.29	32
West Price Hill	6422	17155	1304	2	76.01	22	20.31	12
Westwood	8853	29950	2272	1	75.86	23	25.66	6
Winton Hills	2005	4787	276	23	57.66	34	13.77	29

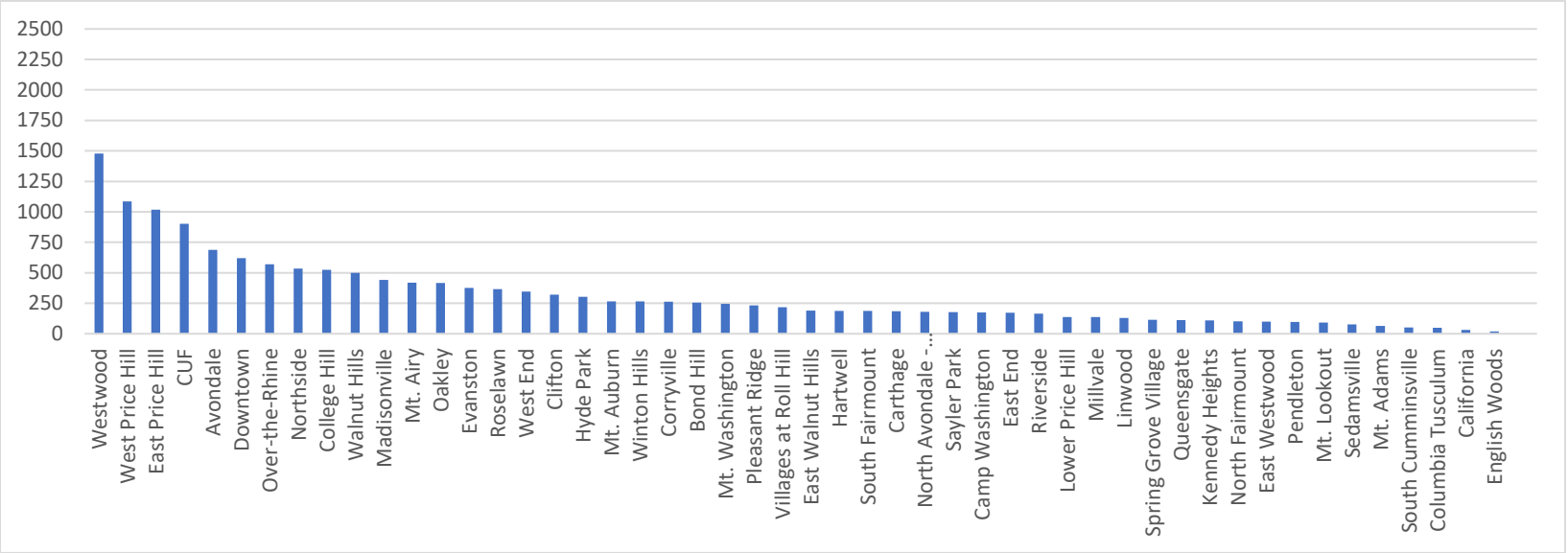
Appendix H. Violent crime per neighborhood, Cincinnati, OH, 2010

			Violent Crime					
Neighborhood	# of Places	Population	All Calls	All Calls Rank (Most to Least)	Crime Rate (per 1,000 people)	Crime Rate Rank (Most to Least)	Crime Rate (per 100 places)	Crime Place Rate Rank (Most to Least)
Avondale	4346	12466	522	3	41.87	12	12.01	5
Bond Hill	3096	6972	130	19	18.65	30	4.20	30
California	602	469	4	48	8.53	42	0.66	47
Camp Washington	1020	1343	47	36	35.00	15	4.61	26
Carthage	1324	2733	75	25	27.44	20	5.66	21
Clifton	2588	8304	94	23	11.32	39	3.63	34
College Hill	5560	14133	246	10	17.41	32	4.42	28
Columbia Tusculum	829	1304	1	50	0.77	49	0.12	49
Corryville	1171	3327	148	17	44.48	11	12.64	3
CUF	4201	16989	264	9	15.54	36	6.28	17
Downtown	2498	4850	294	8	60.62	6	11.77	6
East End	1635	1518	27	40	17.79	31	1.65	43
East Price Hill	6235	15340	541	2	35.27	14	8.68	13
East Walnut Hills	2029	3794	32	38	8.43	43	1.58	44
East Westwood	775	2445	66	27	26.99	21	8.52	14
English Woods	141	405	7	47	17.28	33	4.96	23
Evanston	3361	9158	211	13	23.04	27	6.28	18
Hartwell	2057	4640	42	37	9.05	41	2.04	38
Hyde Park	5550	13356	30	39	2.25	48	0.54	48
Kennedy Heights	2022	4847	55	34	11.35	38	2.72	37
Linwood	899	875	18	44	20.57	28	2.00	39
Lower Price Hill	848	1075	66	28	61.40	5	7.78	15
Madisonville	4355	9141	147	18	16.08	35	3.38	36
Millvale	931	2399	112	21	46.69	9	12.03	4
Mt. Adams	913	1481	10	46	6.75	45	1.10	46
Mt. Airy	2558	8779	231	11	26.31	24	9.03	12
Mt. Auburn	2471	4904	152	16	31.00	18	6.15	19
Mt. Lookout	2096	4814	2	49	0.42	50	0.10	50
Mt. Washington	4602	11711	78	24	6.66	46	1.69	42
North Avondale - Paddock Hills	1651	4188	63	30	15.04	37	3.82	32
North Fairmount	1593	1812	61	32	33.66	17	3.83	31
Northside	4305	7467	193	15	25.85	26	4.48	27

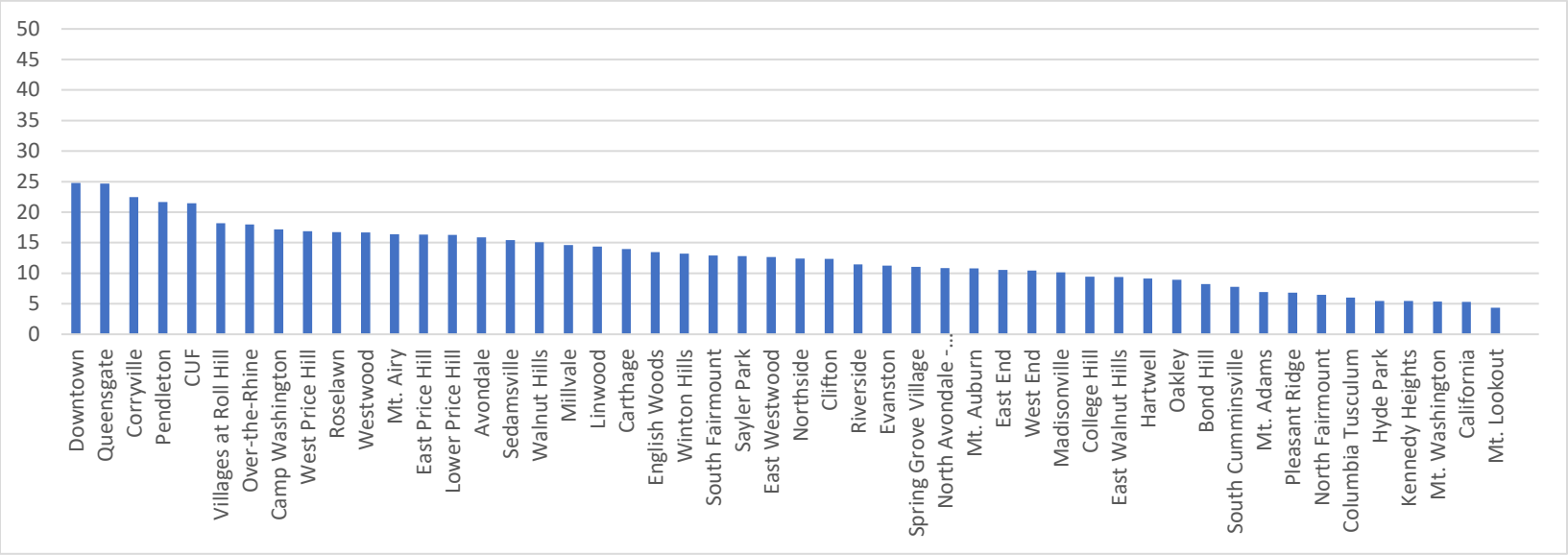
Oakley	4668	10429	68	26	6.52	47	1.46	45
Over-the-Rhine	3163	6064	578	1	95.32	2	18.27	1
Pendleton	443	900	56	33	62.22	4	12.64	2
Pleasant Ridge	3406	8083	65	29	8.04	44	1.91	40
Queensgate	454	142	21	43	147.89	1	4.63	25
Riverside	1432	2340	62	31	26.50	22	4.33	29
Roselawn	2186	6440	217	12	33.70	16	9.93	9
Sayler Park	1385	2765	26	41	9.40	40	1.88	41
Sedamsville	499	680	18	45	26.47	23	3.61	35
South Cumminsville	655	801	24	42	29.96	19	3.66	33
South Fairmount	1448	2368	107	22	45.19	10	7.39	16
Spring Grove Village	1035	1964	51	35	25.97	25	4.93	24
Villages at Roll Hill	1194	1916	125	20	65.24	3	10.47	7
Walnut Hills	3305	6495	322	7	49.58	8	9.74	11
West End	3312	6627	339	5	51.15	7	10.24	8
West Price Hill	6422	17155	325	6	18.94	29	5.06	22
Westwood	8853	29950	513	4	17.13	34	5.79	20
Winton Hills	2005	4787	198	14	41.36	13	9.88	10

Appendix I. Bar Charts Showing Variation in Crime Across Neighborhoods, Cincinnati, OH, 2010

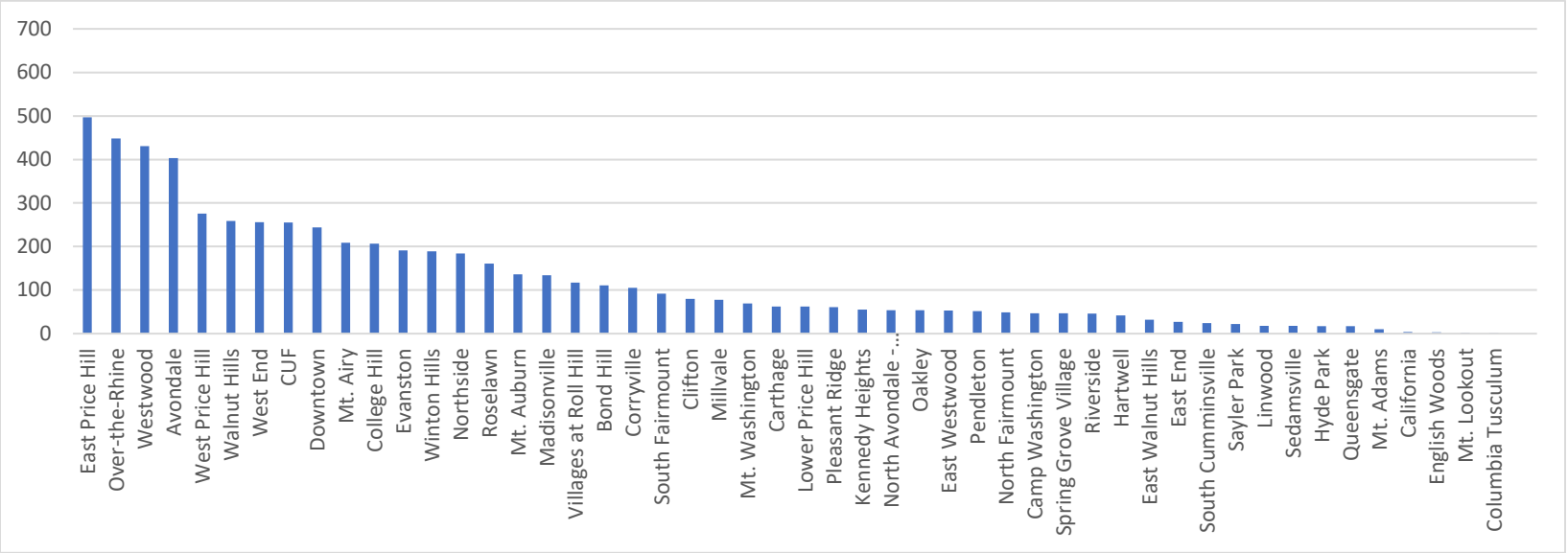
Property crime per neighborhood absent crime from hotspots with 4 or more crimes



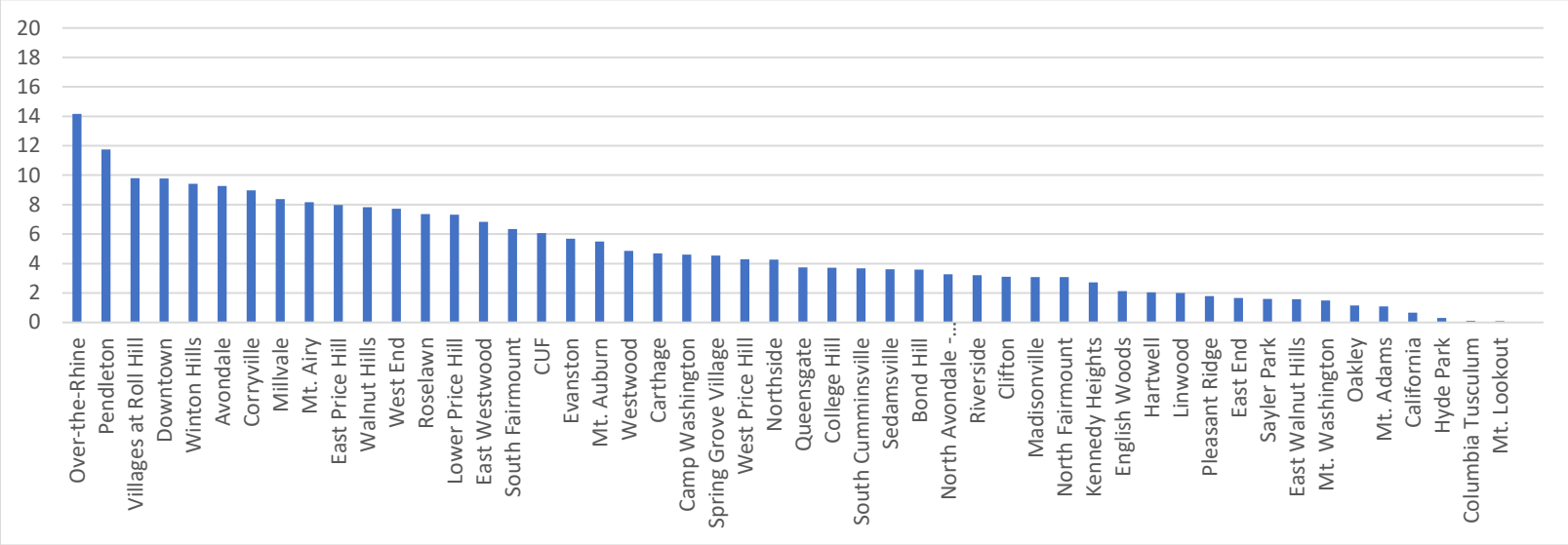
Property crime per neighborhood absent crime from hotspots with 4 or more crimes standardized per 100 places



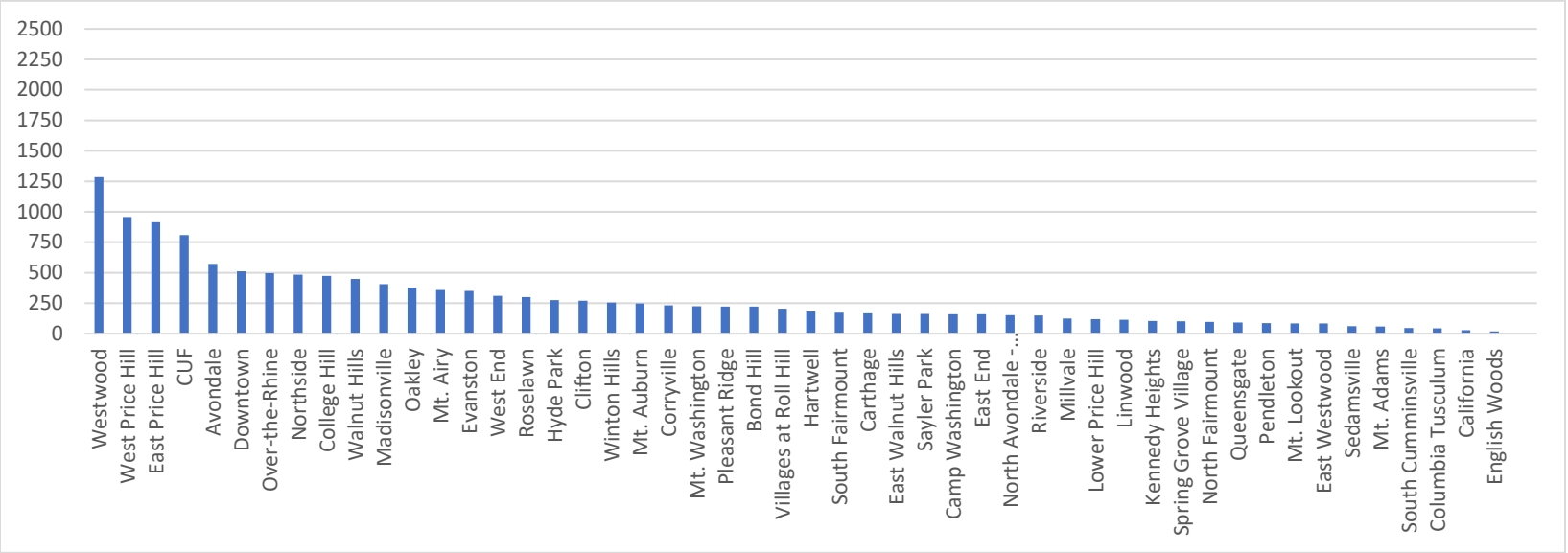
Violent crime per neighborhood absent crime from hotspots with 4 or more crimes



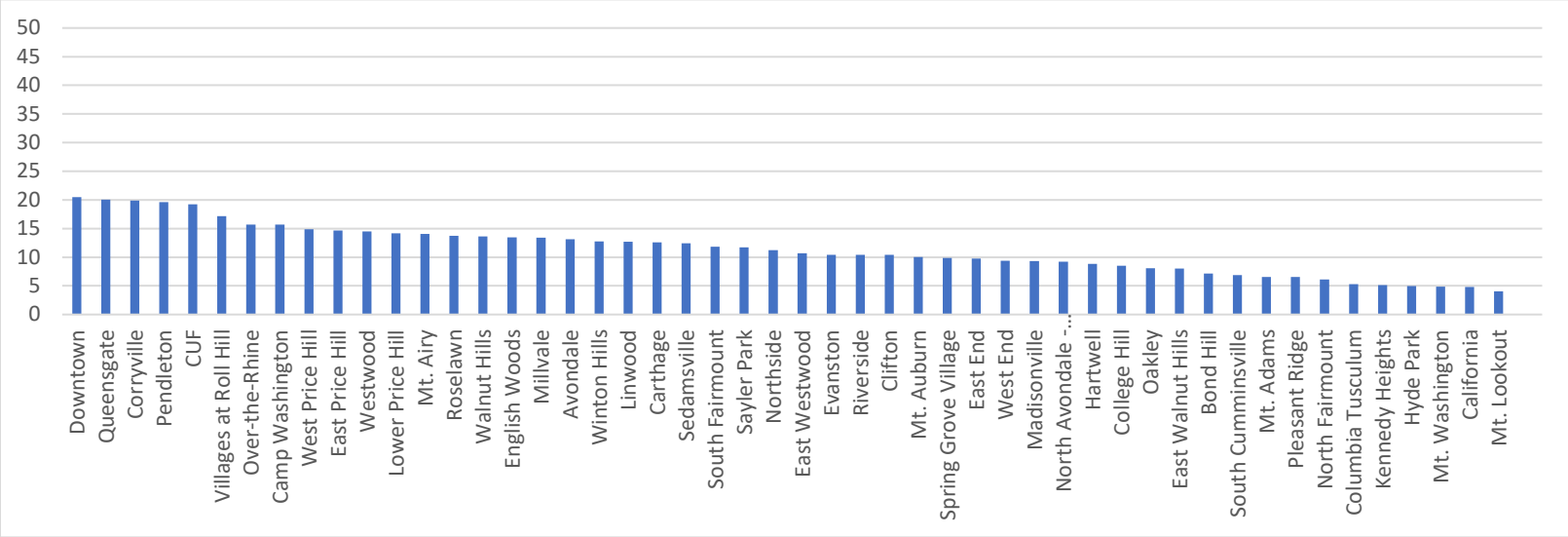
Violent crime per neighborhood absent crime from hotspots with 4 or more crimes standardized per 100 places



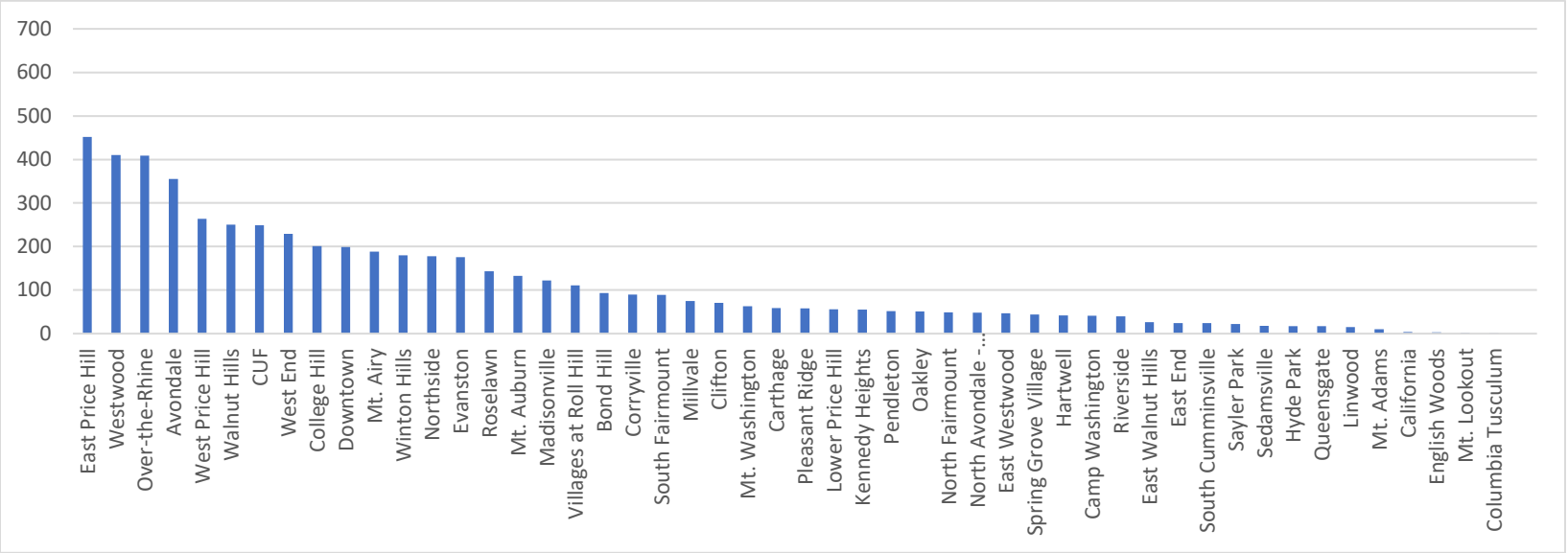
Property crime per neighborhood absent crime from hotspots with 3 or more crimes



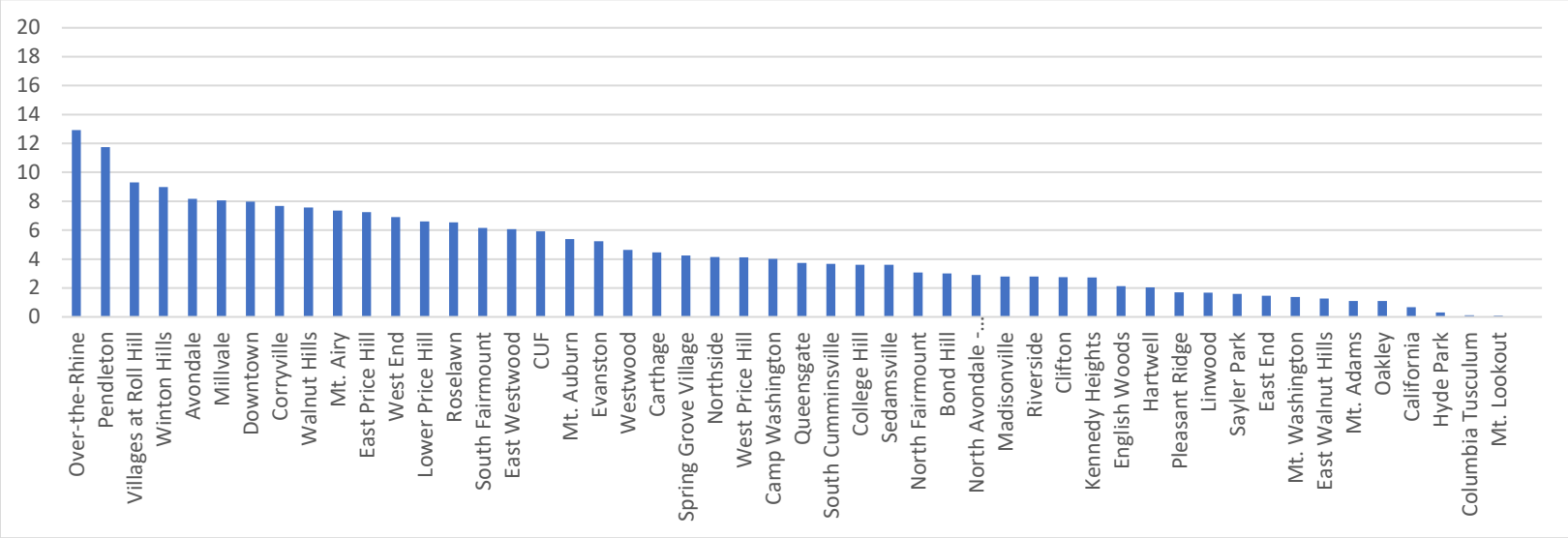
Property crime per neighborhood absent crime from hotspots with 3 or more crimes standardized per 100 places



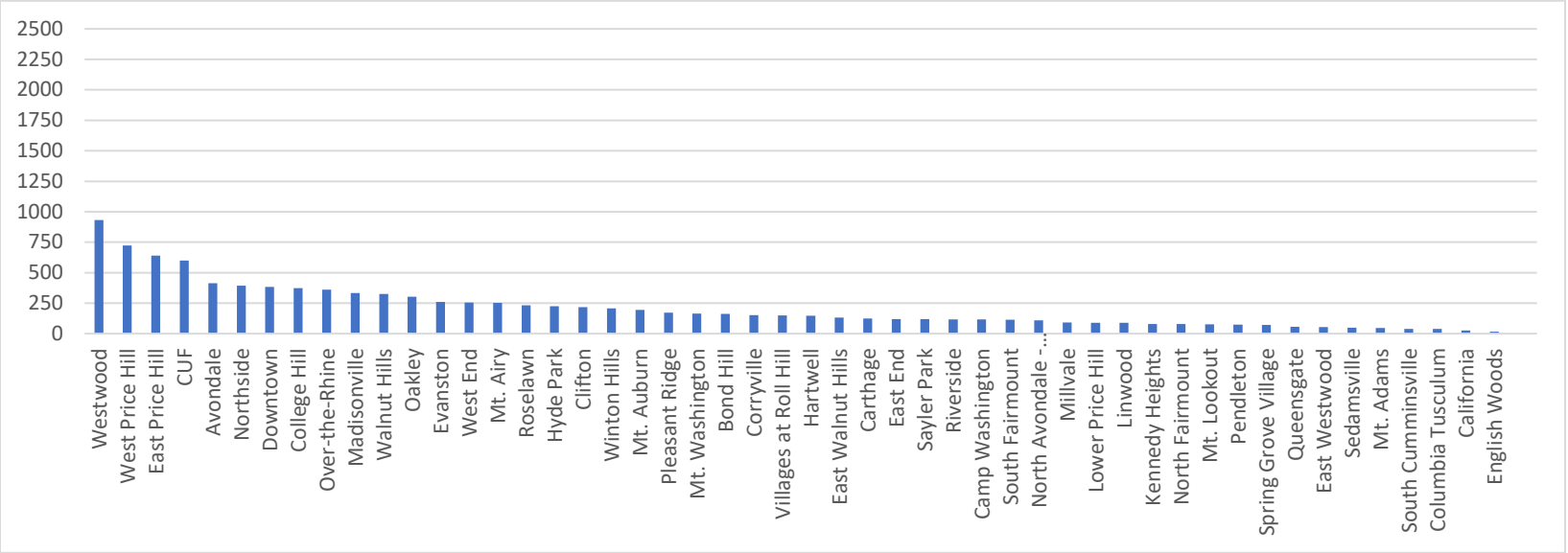
Violent crime per neighborhood absent crime from hotspots with 3 or more crimes



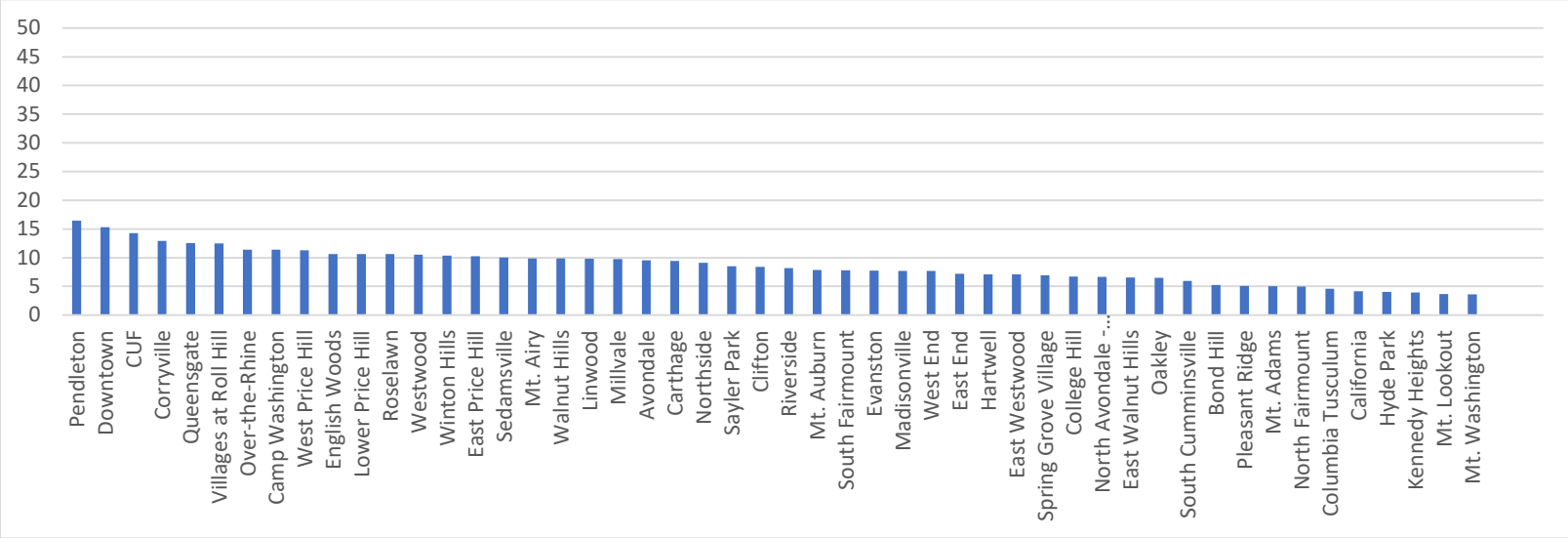
Violent crime per neighborhood absent crime from hotspots with 3 or more crimes standardized per 100 places



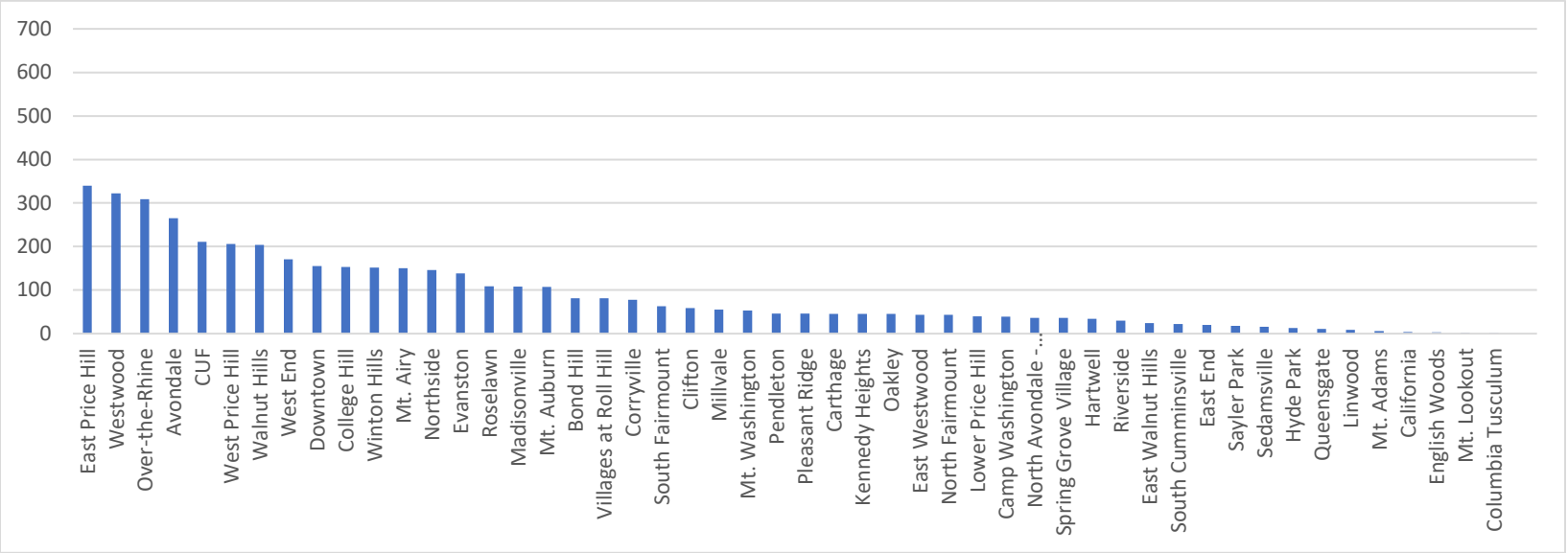
Property crime per neighborhood absent crime from hotspots with 2 or more crimes



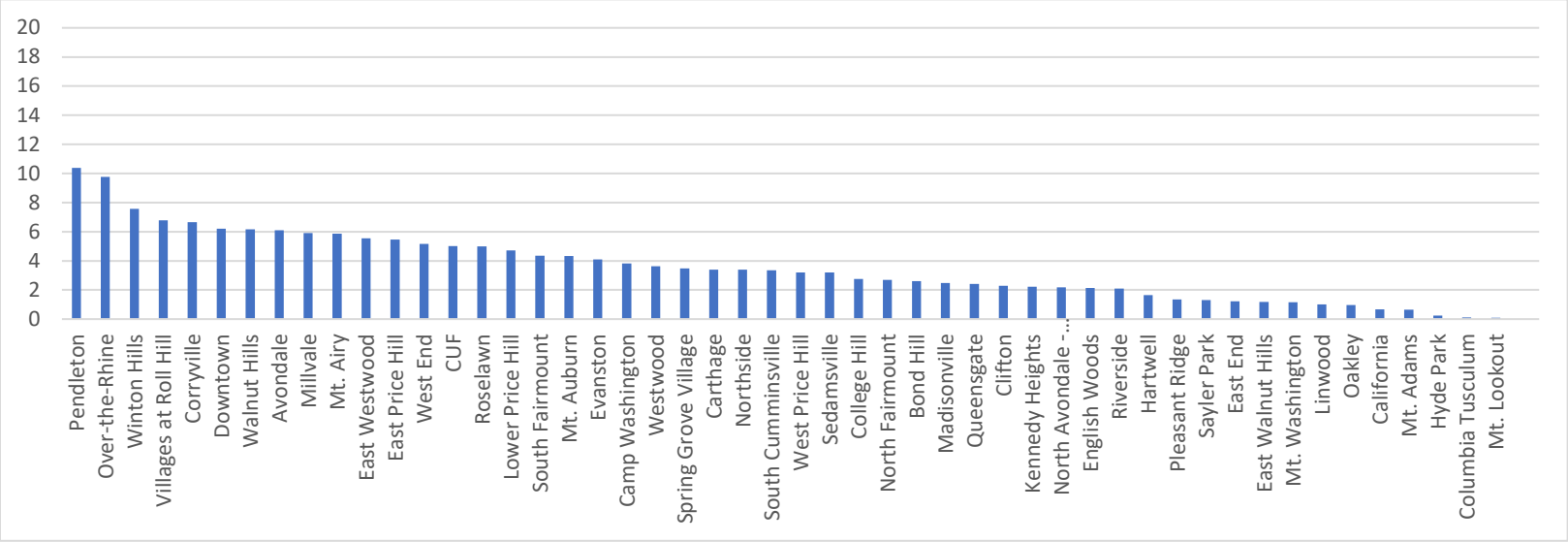
Property crime per neighborhood absent crime from hotspots with 2 or more crimes standardized per 100 places



Violent crime per neighborhood absent crime from hotspots with 2 or more crimes



Violent crime per neighborhood absent crime from hotspots with 2 or more crimes standardized per 100 places



Appendix J. Neighborhood models absent hotspot crimes, OLS regressions, Cincinnati census tracts, 2010.

Model	Crime Type	Hotspot defined as X or more crimes per year	Neighborhood model statistics							
			Adj. R^2	SE of Estimate	F-statistic	Intercept (SE)	Total Population (SE)	Racial Diversity (SE)	Concentrated Disadvantage (SE)	Residential Mobility (SE)
1	Property	> max.	0.359	87.69	16.26***	253.14*** (67.6)	0.03*** (0.006)	117.84* (54.7)	24.04** (8.7)	-2.79*** (0.7)
2	Property	5	0.508	51.35	29.11***	186.08*** (39.58)	0.03*** (0.004)	58.56 (32.04)	25.76*** (5.07)	-1.85*** (0.43)
3	Property	4	0.515	47.16	29.90***	171.57*** (36.35)	0.02*** (0.003)	58.40* (29.43)	24.18*** (4.66)	-1.67*** (0.39)
4	Property	3	0.521	41.11	30.61***	143.34*** (31.69)	0.02*** (0.003)	52.70* (25.66)	22.14*** (4.06)	-1.37*** (0.34)
5	Property	2	0.481	31.38	26.21***	99.90*** (24.19)	0.02*** (0.002)	32.15 (19.58)	15.28*** (3.10)	-0.882** (0.26)
6	Violent	> max.	0.476	35.46	25.79***	72.57** (27.33)	0.01*** (0.003)	13.96 (22.13)	32.02*** (3.50)	-0.53 (0.30)
7	Violent	5	0.517	29.82	30.15***	63.50** (22.99)	0.01*** (0.002)	15.38 (18.61)	29.01*** (2.94)	-0.48* (0.25)
8	Violent	4	0.535	27.31	32.29***	60.68** (21.05)	0.01*** (0.002)	14.87 (17.04)	27.18*** (2.70)	-0.48** (0.23)
9	Violent	3	0.564	23.97	36.25***	50.92** (18.48)	0.01*** (0.002)	15.73 (14.96)	25.44*** (2.37)	-0.39* (0.20)
10	Violent	2	0.576	18.49	37.97***	39.01** (14.26)	0.01*** (0.001)	10.97 (11.54)	19.86*** (1.83)	-0.31* (0.15)

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; # of places in Cincinnati: 124,127; N = 110

Appendix K. Neighborhood models using only crimes from hotspots, OLS regressions, Cincinnati census tracts, 2010

Model	Crime Type	Hotspot defined as X or more crimes per year	Neighborhood model statistics							
			Adj. R^2	SE of Estimate	F-statistic	Intercept (SE)	Total Population (SE)	Racial Diversity (SE)	Concentrated Disadvantage (SE)	Residential Mobility (SE)
11	Property	5	0.086	51.52	3.57**	70.06 (39.72)	0.005 (0.004)	59.28 (32.15)	-1.72 (5.09)	-0.95* (0.43)
12	Property	4	0.106	54.36	4.42**	84.57* (41.91)	0.01 (0.004)	59.45 (33.92)	-0.14 (5.37)	-1.12* (0.45)
13	Property	3	0.136	61.08	5.28**	112.80* (47.1)	0.01* (0.004)	65.15 (38.12)	1.90 (6.03)	-1.42** (0.51)
14	Property	2	0.217	69.25	8.56***	156.24* (53.39)	0.02** (0.005)	85.70* (43.21)	8.75 (6.84)	-1.91** (0.58)
15	Violent	5	0.071	9.40	3.10*	9.07 (7.25)	0.001 (0.001)	-1.42 (5.87)	3.02** (0.93)	-0.05 (0.08)
16	Violent	4	0.122	11.74	4.80**	11.89 (9.05)	0.001 (0.001)	-0.91 (7.33)	4.84*** (1.16)	-0.05 (0.10)
17	Violent	3	0.153	15.02	5.92***	21.65 (11.58)	0.001 (0.001)	-1.77 (9.37)	6.58*** (1.48)	-0.14 (0.13)
18	Violent	2	0.258	20.69	10.50***	33.55* (15.95)	0.002 (0.001)	2.99 (12.91)	12.13*** (2.04)	-0.22 (0.17)

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; # of places in Cincinnati: 124,127; N = 110