



The crime kaleidoscope: A cross-jurisdictional analysis of place features and crime in three urban environments



Jeremy D. Barnum ^{a,*}, Joel M. Caplan ^a, Leslie W. Kennedy ^a, Eric L. Piza ^b

^a Rutgers Center on Public Security, Rutgers University School of Criminal Justice, Newark, NJ, USA

^b John Jay College of Criminal Justice, City University of New York, USA

ARTICLE INFO

Article history:

Received 25 May 2016

Received in revised form

17 October 2016

Accepted 22 December 2016

Available online 17 January 2017

Keywords:

Crime pattern theory

Risk terrain modeling

Spatial influence

Robbery

ABSTRACT

Research identifies various place features (e.g., bars, schools, public transportation stops) that generate or attract crime. What is less clear is how the spatial influence of these place features compares across relatively similar environments, even for the same crime. In this study, risk terrain modeling (RTM), a geospatial crime forecasting and diagnostic tool, is utilized to identify place features that increase the risk of robbery and their particular spatial influence in Chicago, Illinois; Newark, New Jersey; and Kansas City, Missouri. The results show that the risk factors for robbery are similar between environments, but not necessarily identical. Further, some factors were riskier for robbery and affected their surrounding landscape in different ways than others. Consistent with crime pattern theory, the results suggest that the broader organization of the environmental backcloth affects how constituent place features relate to and influence crime. Implications are discussed with regard to research and practice.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

Crime can happen anywhere, but some places are more likely to experience crime than others. Research has found that a majority of police demand originates from just a few places (e.g., Braga, Hureau, & Papachristos, 2011; Braga, Papachristos, & Hureau, 2010; Sherman, Gartin, & Buerger, 1989; Weisburd, Groff, & Yang, 2012). Places are “very small micro units of analysis,” including specific addresses, groups of addresses, block faces, or street segments (Weisburd, 2008, p. 2). Crime concentrates at certain places because of their unique social and physical qualities, which creates context that invites and sustains legally problematic behavior (Eck & Weisburd, 1995; Kennedy, Caplan, & Piza, 2011).

Environmental criminological theories (Wortley & Mazerolle, 2008) frame crime events within the context of the environmental backcloth (Brantingham & Brantingham, 1993). Distributed through this backcloth are place features, such as bars, schools, or public transportation stops that generate and attract crime (e.g., Brantingham & Brantingham, 1995). However, environments are highly complex, and though many of the same features exist within different environments, their overall form and function is distinct

(Lynch, 1960). Kennedy (1983) refers to the kaleidoscopic organization of place features about the urban landscape resulting from variety of forces (i.e., historical, cultural political, and economic) that influences its past and ongoing development. Poon (2015) posits that environments have their own “spatial DNA.” Given the relative organization of each jurisdiction's environmental backcloth, the spatial influence of constituent place features on crime may not necessarily generalize across environments, even for the similar types of crime.

This study compares the criminogenic spatial influence of place features in different urban environments. It is hypothesized that place features commonly assumed to correlate with crime may not have a static influence, even across similar types environments for similar types of crime. Risk terrain modeling (RTM), a geospatial crime forecasting and diagnostic tool (Caplan, Kennedy, & Miller, 2011), is utilized to identify place features that increase the risk of robbery and their particular spatial influence in Chicago, Illinois; Newark, New Jersey; and Kansas City, Missouri. The results show that the significant risk factors for robbery were similar across environments, but not necessarily identical. In other words, just because a given place feature aggravated robbery in one jurisdiction does not necessarily mean it did so in another. Further, some factors were riskier for robbery and affected their surrounding landscape in different ways than others. Consistent with theories of environmental criminology, the results suggest that the broader

* Corresponding author. School of Criminal Justice, Rutgers University – Newark, 123 Washington Street, Newark, NJ, 07102, USA.

E-mail address: jeremy.barnum@rutgers.edu (J.D. Barnum).

organization of the environmental backcloth affects how constituent place features relate to and influence crime, which has implications for theories of crime and place and policy implications pertaining to the ways in which police should respond to problematic places throughout their jurisdiction to achieve crime prevention.

2. Conceptual framework

In the mid-20th century [Shaw and McKay \(1942\)](#) observed that juvenile delinquency was unevenly distributed throughout the environmental landscape of Chicago. Specifically, they demonstrated that delinquency was highly concentrated in areas surrounding the center of the city and gradually declined in areas moving radially outward towards the edges of the city in a fashion consistent with the concentric zone model developed by [Burgess \(1925\)](#). Further, they found that delinquency remained highly concentrated in these particular areas over time, regardless of the people who lived there.⁵ They attributed their findings to social disorganization caused by broader structural forces of communities such as poverty, residential mobility, and demographic heterogeneity.

Subsequent research had difficulty generalizing these particular spatial patterns of crime to other cities ([Bursik, 1988](#)). Following World War II there was a large-scale population movement; “Dirty industries left [the inner city] to be in the suburbs, or even other developing countries. Downtown living became a luxury, and former working class neighborhoods [were] invaded by professionals in the process of gentrification” ([Andresen, 2014](#), p. 21). Ecological change was the norm and the concentric zone model used by Shaw and McKay to illustrate the distribution of crime in Chicago did not necessarily “fit” other cities. Indeed, alternative ecological models such as the sector model ([Hoyt, 1939](#)) and the multiple nuclei model ([Harris & Ullman, 1945](#)) were developed to describe the ecological structure of other cities. Another limitation of this research was that “environments” from this perspective largely referred to community structural characteristics of an area, rather than the physical qualities of places ([Kennedy, 1983](#)). Yet, the built environment plays an important role in organizing human behavior and thereby providing ample opportunity for crime.

Crime pattern theory ([Brantingham & Brantingham, 2008](#)) integrates notions of rational choice ([Clarke & Cornish, 1985](#)) and routine activities ([Cohen & Felson, 1979](#)) to describe this relationship. Essentially, crime is the product of decisions about offending and the distribution of offenders, targets, and guardians, each of which are shaped by the physical environmental landscape. Specifically, willing offenders are cued as they encounter viable opportunities for crime. Decision templates provide offenders with a mechanism for recognizing and discerning good from bad targets. Decisions that lead to successfully carrying out a criminal act reinforce the template; if unsuccessful, the template is revised to avoid such decisions in the future.

Crime opportunities arise within the context of the environmental backcloth ([Brantingham & Brantingham, 1993](#)), which includes individuals' routine activities and the underlying networks of roads, buildings, and other infrastructure. Offenders and victims traverse the environment, engaging in their normal routines and traveling among their regular activity spaces. Crime occurs when offenders' encounter a target that fits their decision template. Such encounters are more likely to occur at places that facilitate the

“overlapping lifestyles or spatio-temporal movement patterns” of offenders and targets ([Brantingham & Brantingham, 2008](#), p.87). Certain places do so more than others because they contain features that generate or attract crime ([Brantingham & Brantingham, 1995](#)). Crime generators concentrate a large number of people, both potential offenders and victims, in specific locations at the same time. Crime is more likely at crime generators because of the large number of interactions that take place. Conversely, crime attractors specifically draw motivated offenders given well-known criminal opportunities.

Place features that generate and attract crime are distributed throughout the landscape along various paths, or the routes people take (e.g., roads, sidewalks, etc.) and edges, or distinct changes in the landscape (e.g., railways, changes in land use, neighborhood boundaries, etc.), which create nodes, or areas of intense activity ([Brantingham & Brantingham, 1984](#)). The distribution of these features throughout each jurisdiction's environmental backcloth is unique as the result of various processes involving local policies and regulations with regard to zoning, infrastructure, and urban planning. Physical landscapes are constructed around natural terrains and molded around particular social, cultural, historical, and economic systems all of which influence their unique form and function and ongoing change and development. The combination of these forces ensures distinctiveness in the image of cities and the ways in which behavior within them unfolds ([Lynch, 1960](#)). [Kennedy \(1983, p.11\)](#) conceptualizes this through the analogy of a kaleidoscope (see [Fig. 1](#)). The kaleidoscope represents an environment (e.g., City A) and the shards of glass embody place features (e.g., bars, restaurants, public transportation stops) within that environment. The arrangement of place features encompasses an environment's form. Moving from one environment to the next (e.g., from City A to City B), or turning the kaleidoscope, alters the form of that environment. Central to the analogy is that the patterning of features varies between environments, but the parts and processes that create these patterns are the same. Thus, it is the particular combinations of features at places in different environments that must be identified to understand the distribution of behaviors and crime.

In sum, early ecological research demonstrated that crime is more likely in some areas of a city compared to others and suggested that there is value in considering what it is about those areas, beyond the individuals that exist there, that foster illegal behavior. However, this perspective primarily focused on community structural characteristics and largely neglected the influence of the physical features of environments on crime. Modern advances in data and technology have allowed researchers to demonstrate that crime is highly concentrated at very specific places throughout the geographic landscape. In this regard, several perspectives have emerged, falling under the broader realm of environmental criminology to provide a theoretical basis to this phenomenon. These perspectives discuss how physical place features throughout the environmental backcloth can generate or attract crime by structuring the everyday routines of individuals and creating good opportunities for offending. However, each jurisdiction has a unique backcloth and the particular ways in which certain features come together to create conditions for illegal behavior may not generalize, even for the same crime. Therefore, it is important to identify these patterns within the environmental backcloth of each jurisdiction to better understand the more localized spatial dynamics of crime.

3. The study

The purpose of this study is to examine the physical landscapes of different environments and their relative influence on crime.

⁵ “Areas” is utilized intentionally. The bulk of urban ecological research has focused on large areal units, such as census tracts or blocks. In contrast, more recent research has focused specifically on “places” as described by [Weisburd \(2008\)](#).

Download English Version:

<https://daneshyari.com/en/article/6458441>

Download Persian Version:

<https://daneshyari.com/article/6458441>

[Daneshyari.com](https://daneshyari.com)