

Crime Analyst's Research Digest

Compiled and edited by the
IACA Publications Committee:

Julie Wartell (chair), Samantha Gwinn,
Greg Jones & Thomas Scholten



Serving the Crime Analysis Community Since 1990

**International Association of
CRIME ANALYSTS**
800.609.3419
www.iaca.net

March 2014

Risky Facilities

Table of Contents

Introduction	i
Victimization Revisited: A Case Study of Non-residential Repeat Burglary on Merseyside	1
Risky Facilities: Crime Concentration in Homogeneous Sets of Establishments and Facilities	2
Crime Places in Crime Theory	3
Busy Places and Broken Windows? Toward Defining the Role of Physical Structure and Process in Community Crime Models	4
Preventing Drunkenness and Violence around Nightclubs in a Tourist Resort	5
Curbing Nuisance Motels: An Evaluation of Police as Place Regulators.....	6
An Examination of Situational Crime Prevention Strategies across Convenience Stores and Fast-Food Restaurants	7
Understanding Risky Facilities	8

Introduction

Dear IACA Members,

We are pleased to bring you this edition of the Crime Analyst's Research Digest, which focuses on the theme of risky facilities. Risky facilities are types of places that serve a unique purpose, such as parks, bars and taverns, and bus transfer points. Within these categories, some facilities are particularly risky, often due to environmental factors and/or management practices, and therefore generate a higher than normal volume of police calls for service.

Some highlights of this issue include:

- Research examining the impact of a long-term problem-solving project whose goal was to reduce calls for service at budget motels and hotels in Chula Vista, California. The outcome of the project resulted in a significant reduction of crimes, increased tax revenue, and improved quality and appearance at several motels.
- A study investigating whether non-residential properties experience the same pattern of repeat victimization as residential properties. The findings revealed that certain types of non-residential properties – educational and sports facilities – are more likely to be the targets of repeat victimization. Health care facilities, residential care homes, and manufacturing and retail properties demonstrated a lower than average prevalence of repeat victimization.
- An article exploring the idea of place management and its role in preventing crime and poor quality of life issues. Incorporating the role of effective place management into crime analysis can provide a valuable prevention measure to problematic areas.
- Research examining the variation between certain *types* of crime and place. Researchers have found that the type of land use can also play a role in violence and burglary. Residential stability can also mitigate the effects of business land use and burglary.

Another great resource to find more articles and practical application of these theories can be found at the [POP Center website](#). As always, enjoy the digest and we welcome any feedback at publications@iaca.net.

Tom Scholten
Editor, Crime Analyst's Research Digest
IACA Publications Committee

Victimization Revisited: A Case Study of Non-residential Repeat Burglary on Merseyside

Kate Bowers, Alex Hirschfield and Shane Johnson

Summary by Kari Davies, University of Birmingham

Summary

This study investigated whether non-residential properties are subject to the same pattern of repeat victimisation as residential properties, and whether the areas in which these properties are located affects their likelihood of being repeatedly burglarized. This study not only demonstrates that the concept of repeat victimisation prevails when examining non-residential burglary as well as residential burglary, but also shows support for the idea of risky facilities, given the vulnerability of specific types of facilities over others.

Data and Methods

Four datasets were analysed in this investigation, all pertaining to properties and crimes in Merseyside, Liverpool, UK. The first two datasets contained information on socio-economic conditions in the area; these geo-demographic data were used in order to classify ten different types of neighbourhoods of varying affluence. The third dataset contained the total number of non-residential properties in the area. The final dataset related to information on crime as recorded by Merseyside Police Force. Twelve months' worth of non-residential burglary data was gathered from Merseyside Police's Integrated Criminal Justice System, totalling 11,976 incidents.

Findings

Non-residential properties are at much higher risk of being the victims of burglary, and consequently repeatedly victimised, than are residential properties. Nearly twenty-four percent of non-residential properties in Merseyside were burgled, compared to 3.3% of residential properties. Furthermore, 21.4% of all burglaries committed at non-residential properties were repeat incidents of victimisation, in comparison with 7% of all burglaries at residential properties.

It was also found that certain types of non-residential properties – educational and sports facilities – are far more likely to be the targets of repeat victimisation. In contrast, health care facilities, care homes, and manufacturing and retail properties demonstrated a lower-than-average prevalence of repeat victimisation.

The temporal analyses demonstrated that the risk of repeat victimisation is greatest immediately after an incident; 43% of non-residential properties were repeatedly burgled within one month, compared to 32.5% of residential properties.

For more information, see Bowers, K. J., Hirschfield, A., & Johnson, S. D. (1998). Victimization revisited: A case study of non-residential repeat burglary on Merseyside. *British Journal of Criminology*, 38(3), 429-452.

Risky Facilities: Crime Concentration in Homogeneous Sets of Establishments and Facilities

John E. Eck, Ronald V. Clarke and Rob T. Guerette

Summary by Chris Herrmann, Berkeley College

Summary

This article provides an overview of the Pareto principle (i.e., the 80/20 rule) as applied to crime places. The risky facilities phenomenon is very similar to the concept of repeat victimization; risky facilities focuses on repeatedly targeted places, while repeat victimization focuses on repeatedly targeted persons or groups of individuals. The authors (a) provide several examples of how and why crime places should be categorized by facility types, (b) explain different ways to measure crime within facility types, and (c) provide practical tips on how this process can benefit police departments.

Data and Methods

The authors identified 37 studies that focused on specific types of facilities (e.g., banks, bars, schools, bus stops, parking garages). The literature review provides an interesting overview of some of the highlights of previous risky facilities research. While there is variety in the type of crime and concentration of crime within specific facility types, the authors were able to demonstrate how to measure the distribution of crime using the “J-Curve” (Allport, 1934). A J-Curve shows the distribution or “spread” of crime by business type, as well as the distribution of crime within each business type. Several examples are provided in the article.

Results

The primary findings in this article discuss examples of crime variations within specific risky business types. The authors define different causes for labeling a location as a risky facility; however, this research is not meant to be used as a tool to explain why high rates of crime are occurring at one location versus another. The risky facilities process is meant to be a first step in identifying problem locations, which should then be targeted for further analysis and problem-oriented policing strategies.

The concept of place management is not often discussed among crime analysts, although it is a very important component in crime prevention and crime control. As noted in the article, high crime facilities may contain “fewer rules, lax enforcement, easy access, poor security, and other features that help offenders detect targets, commit crimes, and get away.” Crime analysts can have a significant impact on preventing future incidents at risky facilities by conducting on-site analysis and providing place managers with recommendations on crime prevention and control strategies.

The authors provide information regarding several prevention areas on which to focus, including the specific circumstances of the business, place managers being unaccountable or even profiting from the criminal activity, and the high cost of crime prevention measures. The conclusion of this article promotes adopting the concept of risky facilities as an environmental criminology theory.

For more information, see Eck, J. E., Clarke, R. V., & Guerette, R. T. (2007). Risky facilities: Crime concentration in homogeneous sets of establishments and facilities. *Crime Prevention Studies*, 21, 225.

Crime Places in Crime Theory

John E. Eck and David Weisburd

Summary by Chris Herrmann, Berkeley College

Summary

This article provides an overview of the importance of studying and analyzing crime at places (e.g., street corners, buildings, street segments). While the hot-spot literature has primarily focused on high crime areas within neighborhoods, “crime places” should be viewed as one of the analytical processes that helps analysts to “zero in on crime” within a hot-spot or high crime neighborhood/community. The introductory section of this article provides an overview of the current trends in crime analysis, and the focus on micro-level relationships.

Data and Methods

The authors review the evidence that has been completed in the field of crime prevention, which indicates the importance of micro-level places in the development of crime prevention and control strategies (similar to the “Risky Facilities” article, also reviewed in this digest). One of the primary highlights of this article is the important role in understanding three criminological theories: rational choice theory, routine activities theory, and crime pattern theory. The majority of the article focuses on how crime and place play a role in these theories, and why it is important for analysts to understand these important relationships when considering crime prevention and control strategies.

Results

This article illustrates how theory and analysis are married together through the research process. The previous studies that are reviewed by the authors indicate a strong relationship between crime places and crime theory. Several topics are highlighted within this article, such as the relationship between facilities and crime, as well as specific site features that cause some facilities to be riskier than others.

Another interesting part of this article focuses on offender mobility, which looks at geographic relationships, including distance and direction, in the study of micro-level crime places. Offender target selection is also identified as a significant component in crime and place research since offenders typically choose to commit crimes at specific places for specific reasons. The article concludes with an overview of crime displacement and the concept of the diffusion of benefits, which suggests that the benefits of crime prevention and control strategies typically spill over into the surrounding areas outside of the intended targeted area.

For more information, see Eck, J. E., & Weisburd, D. (1995). Crime places in crime theory. *Crime and Place, Crime Prevention Studies*, 4, 1-33.

Busy Places and Broken Windows? Toward Defining the Role of Physical Structure and Process in Community Crime Models

Pamela Wilcox, Neil Quisenberry, Debra T. Cabrera and Shane Jones

Summary by Julie Hibdon, Southern Illinois University Carbondale

Summary

The idea that places can be risky and prone to crime is not new. Research continually finds connections between certain place typologies and crime. In this study, the authors examine the connection between two types of public land use (business-oriented and resident-centered) and two categories of crime (violence and burglary).

Data and Methods

The authors of the study used three separate data sources, the first of which was two years of police records (1989-1990) obtained from the Seattle Police Department. The authors also used 1990 U.S. Census data, aggregated to the tract level, to research land use and concentrated disadvantage. Lastly, the authors incorporated data from a survey of Seattle residents conducted in 1990, which yielded information on the types of land use in the respondent's neighborhood (e.g., businesses, schools, playgrounds), as well as on neighbor behavior and perceptions of physical and social disorder.

Findings and Conclusions

The authors found support for the notion that the type of public land use can have a direct effect on both violence and burglary. The results also support their hypothesis that social dynamics mediate this relationship, although it is different for the two defined categories of public land uses. Specifically, they found that business-oriented public land use can cause increases in disorder, which results in increased instances of both violence and burglary. They note that the effects of business-oriented land use on crime are not completely dependent on disorder, but that if disorder is controlled for, the noted effects of this relationship decline substantially.

The authors also determined that residential stability mediates the connection between business land use and burglary. To understand the relationship between resident-centered public spaces and crime, the authors looked at two specific types of land use: parks/playgrounds and schools. Ultimately, they found that schools have a direct connection to violence but not burglary. Furthermore, they determined that parks/playgrounds have a direct, positive relationship to an increase in burglary but have no effect on instances of violence.

For more information, see Wilcox, P., Quisenberry, N., Cabrera, D. T. and 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. DOI: 10.1111/j.1533-8525.2004.tb00009.x

Preventing Drunkenness and Violence around Nightclubs in a Tourist Resort

Ross Homel, Marg Hauritz, Gillian McIlwain, Richard Wortley and Russell Carvolth

Summary by Will Moreto, University of Central Florida

Summary

This study examines the implementation and evaluation of a community-based intervention, which focused on reducing alcohol-related crime, violence, and disorder in and around licensed premises (i.e., bars and night clubs) in Surfers Paradise, Queensland, Australia. It was designed to improve the image of Surfers Paradise as a tourist destination, while also reducing the fear of victimization.

Data and Methods

The project design was based on three strategies: (1) the establishment of a community forum, which led to community-based task groups and the use of a safety audit; (2) the development and implementation of risk assessments, model house policies in licensed premises by the Project Officer and the Queensland Health Department, and a Code of Practice by nightclub owners; and (3) emphasis on a preventative approach to external regulation by police and liquor licensing inspectors, as well as ensuring compliance with Liquor Act provisions banning the serving of intoxicated persons. The study was separated into two years with 1992 being the pre-implementation year, used to determine baseline information. In 1993, the project was officially implemented and divided into three periods: pre-project (Jan-Mar), development of the Code of Practice (Apr-Jul), and the operational Code of Practice (Aug-Dec).

Data sources used to compare the pre-implementation year to the implementation year included community surveys, interviews with licensees, structured and systematic observation of premises, incidents recorded by security companies, and official police records.

Findings

1. The majority of risk assessment scores increased significantly from the beginning of the implementation period and the introduction of the Code of Practice, indicating an improvement in responsible practices.
2. Observations identified an improvement in cleanliness, bar access and availability of public transportation. The increased use of private security officers, the improved training of bouncers and the age identification of the patrons were also identified as important factors impacted by the project.
3. Official police data show a decrease in recorded incidents for a number of offenses, including theft, indecent acts and drunkenness.

For more information, see Homel, R., Hauritz, R., McIlwain, G., Wortley, R., & Carvolth, R. (1997). *Preventing drunkenness and violence around nightclubs in a tourist resort*. In R.V. Clarke (Ed.), *Situational crime prevention*, 2nd ed (pp.263-282). Albany, NY: Harrow and Heston, Publishers.

Curbing Nuisance Motels: An Evaluation of Police as Place Regulators

Gisela Bichler, Karin Schmerler and Janet Enriquez

Summary by Karin Schmerler, Chula Vista Police Department

Summary

This research examined the long-term impacts of the Chula Vista Motel Project, a three-phase effort to reduce levels of police activity at budget motels and hotels. The first phase of the project was outreach to the motels, during which effective management practices were shared with motel operators. The second phase was code enforcement and public accountability, during which project staff distributed reports to all motel operators that ranked each one by their annual police call-for-service (CFS) per room ratios. The third phase was regulation. In 2006, the city passed a permit-to-operate ordinance that enabled the city to hold motels accountable for meeting a CFS-based public safety performance standard.

Data and Methods

Programmatic impact was determined by comparing pre- and post-project levels of CFS among budget motels located in the study area (the entire city of Chula Vista), a comparison zone (two cities in San Diego County with sixteen motels that were at least ten miles away from the treatment sites), and a displacement/diffusion region (two cities in San Diego County with nine similar motels located within three miles of the treatment sites). Displacement was measured using a weighted quotient. CFS counts for crime and disorder calls to each property were compared for two pre- and post-project periods to separate the effects of the permit-to-operate ordinance from the larger project.

Results

During the course of the project, Part I and Part II crimes at the city's motels went down by 70%, and drug arrests at Chula Vista motels decreased 66%. Further, aggregate transient occupancy tax reported to the city increased. The quality and appearance of several motels improved dramatically, and fewer motels reported targeting a primarily local clientele or renting to long-term guests. All types of police-initiated calls at motels declined 19%, while officer-initiated "arrest felony" calls went down 86%. Vehicle theft reports (a citizen-initiated call type with high reporting rates) went down 66%, mirroring reductions in other call types.

CFS to motels with moderate to high CFS levels were reduced by 58% as a result of the overall initiative (and by 38% as a result of just the permit-to-operate ordinance). Motels located within three miles of the treatment area experienced a diffusion of benefits; CFS levels to these properties went down 25% as a result of the ordinance, but only 6% as a result of the overall initiative. Motels located in the comparison area only experienced a 4% reduction in CFS during the pre- and post-ordinance evaluation period, and a 5% reduction in CFS during the entire project timeline.

For more information, see Bichler, G., Schmerler, K., and Enriquez, J. (2013) Curbing nuisance motels: An evaluation of police as place regulators. *Policing: An International Journal of Police Strategies & Management*, 36(2), 437-462. DOI: [10.1108/13639511311329787](https://doi.org/10.1108/13639511311329787)

An Examination of Situational Crime Prevention Strategies across Convenience Stores and Fast-Food Restaurants

M. Lyn Exum, Joseph B. Kuhns, Brad Koch and Chuck Johnson

Summary by Deborah Lamm Weisel, North Carolina Central University

Summary

This research examined the impact of situational crime prevention (SCP) strategies on robbery at fast-food restaurants and convenience stores, extending similar research that has been applied predominately to convenience stores.

Methods

Researchers examined 614 businesses in Charlotte, NC. Slightly more than half (321) were classified as fast-food restaurants, while the remainder (295) were combined convenience stores/gas stations. The study examined a range of descriptive factors that might explain robberies of the business. These factors included prior victimization (robbery in 2000) and demographic features of the census block for the business, including race/ethnicity composition, poverty, and vacant/rental housing. The study documented business features such as hours of operation, number of employees on duty, presence of an ATM, restrooms, pay phones and proximity to public transportation.

Results

More than one third of the businesses (35.1%) had been robbed in 2001, and the strongest predictor of a robbery was a previous robbery in 2000. Of the businesses robbed in 2000, 92% were robbed again in 2001. Overall, a business that was robbed in 2000 was 40 times more likely to be robbed in 2001. The hours and days of operation were also predictors of robbery victimization; businesses open for longer hours were at greater risk of robbery, but that risk disappeared when the business maintained a minimum number of employees on its third shift.

There was little evidence that SCP strategies prevented overall robberies; however, there were differences between the types of businesses. Among fast-food restaurants, those with obstructed windows had *fewer* robberies as did the stores having a hired police officer. Among convenience stores, those stores with an ATM on the premises had *fewer* robberies while stores with a drop safe but no signage were *more* likely to be robbed.

Implications for Practice

SCP measures overall were *not* effective in reducing robbery victimization in either convenience stores or in fast-food restaurants. However, some measures were more effective in one setting than another. This variation indicates that crime prevention measures must be site-specific and cannot be ubiquitously transferred from one type of business to another. Further, the role of prior robbery victimization was more important in explaining robbery than was any ecological, demographic, business or SCP variable.

For more information, see Exum, M.L., Kuhns, J.B., Koch, B., & Johnson, C. (2010). An examination of situational crime prevention strategies across convenience stores and fast-food restaurants. *Criminal Justice Policy Review*, 21 (3), 269-295. DOI: 10.1 77/0887403409346110

Understanding Risky Facilities

Ronald V. Clarke and John E. Eck

Summary by Tino Posillico, SUNY Farmingdale

Summary

This research defines the meaning of risk, threats and vulnerabilities as they pertain to specific locations of criminal activities. Distinctions between risky facilities, hot spots and repeat victimizations are outlined. The distribution of risky facilities is identified and the means of calculating risk factors and risk density are presented. The differences in various types of facilities are qualified and their various respective risks are categorized. The models for measurement of risk factors are presented and calculations are demonstrated. This approach can be considered a guide or tool in identifying high-risk facilities.

Data and Methodologies

The authors first present data generated from approximately forty sources of specific types of facilities that include data about variations in the threats of crime, disorder, or misconduct at targeted facilities. The data were analyzed and categorized into several types of potentially risky facilities, ranging from convenience stores to schools. Correlation coefficients were calculated while accounting for potential data errors that could skew results, including underreporting, incomplete address matching, mixed used locales, infrequent events, long time periods, facilities with no events, small numbers of facilities and random variations. Finally a six-step procedure is described in detail with examples of police data to calculate the contribution of the riskiest facilities to the categorized criminal behavior.

Results

The six steps comprising the risk tool are:

1. *List the facilities alongside a count of the number of relevant events.* Verify that each facility on the list is of the type being investigated, and that every crime attributed to each facility did occur at that facility.
2. *Rank the facilities according to the number of events associated with each.* Determine whether there is something that differentiates the facilities at the top of the list from those in the middle or at the bottom.
3. *Calculate the percentage of events that each facility contributes.* Calculate targeted events related to total events.
4. *Cumulate the percentages, starting with the riskiest facility.* This shows the proportion of events associated with each percentile.
5. *Calculate the proportion of the facilities that each single facility represents.* Then, cumulate these percentages in the same direction as in step 4 (top down).
6. *Compare the cumulative percentage of facilities to the cumulative percentage of events.* This shows how much the riskiest facilities contribute to the overall problem.

For more information, see Clark, R.V., Eck, J.E. (2007). *Understanding risky facilities*. Tool Guide No. 6. 2013, Center for Problem-Oriented Policing.