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Chapter 22

Situational Crime Prevention

Auzeen Shariati and Rob T. Guerette

Abstract Traditional criminology has focused on the criminal nature of offenders as a means for

reducing crime. In contrast, situational crime prevention (SCP) is a process of multiple stages, and

seeks to understand where, when, and how crime incidents occur. Similar to epidemiology, SCP

has sought to alter environments which host crime behavior in order to make them less suitable for

offending. Based on an analysis of the incidence and distribution of a given crime problem, the

SCP approach then identifies risk factors, formulates and implements appropriate solutions, and

evaluates the results. In this way, the individual "propensity" of offenders, like individual

diagnoses, becomes less important, at least as a means of prevention. This chapter discusses in

more detail the situational crime prevention approach. Following a brief description of its historical

development, the theoretical foundations are presented. An overview of the process and types of

prevention techniques are then outlined followed by a discussion on the existing evidence of

effectiveness.

Keywords: situational crime prevention; criminal opportunities; crime control; crime patterns

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22.1 Defining Situational Crime Prevention

Situational crime prevention (SCP) is an approach to crime prevention which "seeks to reduce opportunities for specific categories of crime by increasing the associated risks and difficulties and reducing the rewards" (Clarke, 1995, p. 91). It is a process of multiple stages which is built upon a theoretical framework, one which seeks to understand where, when, and how crime incidents occur. Based on an analysis of the incidence and distribution of a given crime problem, the SCP approach then identifies risk factors, formulates and implements appropriate solutions, and evaluates the results. According to Clarke (1997), the SCP approach is drastically different from other criminological perspectives, different in the sense that it seeks to predict criminal behavior through focusing on proximal causes of crime in the settings where they occur rather than arresting and punishing offenders. It does not intend to prevent crime by addressing the so called "root causes" of criminal offending such as social inequities, but rather does so through the reduction of crime opportunities. In this way, it is very consistent with the epidemiological approach used in the health sciences.

Situational crime prevention (SCP) and epidemiology are complimentary since they both seek to examine the factors contributing to the environmental growth of a human-related problem in order to find a way of curing it. The connection between epidemiology and criminology more generally has been made by others, referring to the idea as "epidemiological criminology." Where epidemiology is "the study of variables, vectors, and factors that affect disease spread" (Lanier, 2010, p.70), criminology is "the systematic study of the nature, extent, cause, and control of law-breaking behavior" (Lanier & Henry, 2014, p.6). "Epidemiology and criminology are each theoretical disciplines upon which fields of practical application, [public health and criminal justice] are based ...public health and criminal justice have shared similar theories, approaches,

and lexicons of terms in their quest to describe and define various prevention approaches" (Lanier et.al, 2009, p.2-3).

Yet, the parallels between epidemiology and SCP are closer than to traditional criminology. This is because, like traditional medicine which has long focused on treating the individual as a means of prevention, traditional criminology has focused on the criminal nature of offenders as a means for reducing crime. SCP, similar to epidemiology, has instead sought to alter environments which host crime behavior in order to make them less suitable for offending. In this way, the individual "propensity" of offenders, like individual diagnoses, becomes less important, at least as a means of prevention. This chapter discusses in more detail the situational crime prevention approach. Following a brief description of its historical development, the theoretical foundations are presented. An overview of the process and types of prevention techniques are then outlined followed by a discussion on the existing evidence of effectiveness.

22.2 Historical Evolution

The initial idea of situational crime prevention dates back to 1970s when the British Government' Criminological Research Department, employed a group of researchers to review and evaluate conventional methods of crime control. The findings of that research suggested that variations of crime in different settings could be explained by variations in opportunities, incentives, and associated risks (Clarke, 1995). That study, which examined delinquency patterns in juvenile detention facilities, found that crime problems tended to concentrate disproportionately in certain detention facilities. Consequently, situational features of the environment began to be recognized as determinants of criminal offending and a new generation of a situational based crime prevention approach began.

Although the notion of situational prevention initiated in the U.K., its development was influenced by two contemporary strands of thought in the U.S., i.e.: CPTED and Problem-oriented policing (Clarke, 1997). The idea of CPTED (crime prevention through environmental design) had started in architecture (Wood, 1961) and urban studies (Jacobs, 1961) literature as the role of environmental factors in increasing crime and disorder was identified and highlighted. Later, Defensible space theory (Newman, 1972) established a link between environmental conditions and crime, and emphasized on the role of residents in creating a defensible space and reducing the opportunities of crime (Newman, 1996). This theory presented basic elements of a defensible space (Mayhew, 1979) and constituted an initial framework for CPTED (Crowe and Zahm, 1994). The concept of defensible space and standards of CPTED for proper environmental design impacted on SCP's development through guiding the specification and arrangement of situational prevention techniques.

Problem-oriented policing approach (Goldstein, 1979) which is regarded as a milestone in the development of police operations was also of a later influence on situational crime prevention. Problem-oriented policing focuses on directing police activity to identify "underlying problems that give rise to [criminal] incidents...; reliance on the expertise and creativity of line officers to study problems carefully and develop innovative solutions; and closer involvement with the public to make sure that the police are addressing the needs of citizens" (Spelman and Eck, 1987, p.2). The process which serves as a basis for police problem-solving operations, known as the SARA (scanning, analysis, response, and assessment) Model, represents the same process used in situational prevention (Clarke, 1997).

22.3 The Situational Approach of Crime Prevention

Unlike traditional crime prevention strategies which aim at reducing crime and violence by changing criminal propensities, the situational crime prevention (SCP) perspective focuses on the more immediate opportunities for offending. Situational crime prevention seeks to reduce the harms caused by crime through altering immediate or situational factors in the environments where crime regularly occurs. These conditions are the closest in time to crime events and thus can be much more responsive to manipulation (Smith and Clarke, 2012). SCP includes "any opportunity reducing measure, whether of design, management or even policing, intended to increase the difficulties or risks of offending" (Clarke, 1989, p.13).

The SCP framework consists of four major components, which might be considered the pillars of the situational paradigm. These fundamental elements are i) a theoretical foundation, ii) a standard methodology, iii) a set of opportunity reducing techniques, and iv) a body of evaluated practice (Clarke, 1997). While several criminological theories have informed the development of SCP, there are three primary theoretical perspectives which guide the approach. These theories establish an understanding of the underlying factors of crime behavior and propose appropriate responses to those situations/factors in order to prevent crime. Building upon these theoretical foundations, an applied research methodology is called for which is similar to that used in Problem-Oriented Policing. The third component of the SCP framework is a set of opportunity reducing techniques that are commonly used to address situational causes of a given crime problem. The final piece of the situational approach is a body of scholarly evidence on its practicality and effectiveness.

22.4 Theoretical Underpinnings

The three primary theoretical foundations of SCP include Rational Choice Perspective (RCP), Routine Activity Approach (RAA), and Crime Pattern Theory (CPT). The Rational Choice Perspective (RCP), proposed by Clarke and Cornish (1985), assumes that crime is a purposive behavior and potential offenders are rational decision makers. In choosing to commit crime, they assess the costs and benefits of the given act. If the risks and efforts outweigh the potential rewards of a given crime it should be less likely to occur. The implication for SCP then, is that if offenders make decisions based on their perceptions of the suitability for carrying out crime acts, then the situational environment can be manipulated in such a way that alters the perceived desirability for offending. The Rational Choice framework helps to understand why some places experience more crime than others and why some targets are victimized while others are not. The theory also helps to understand and identify suitable prevention tactics which serve to offset the ratio of acceptable effort and risk to rewards so that the likelihood of crime decreases. Many of the SCP techniques for prevention are derived from the rational choice explanation of crime events.

The Routine Activity Approach (RAA) which was proposed by Cohen & Felson (1979) is another theory that helps explain why and how crime occurs and which identifies viable methods of prevention. According to this approach three elements are necessary for crime to occur, which includes a motivated offender, a suitable target, and lack of a capable guardian (often referred to as the crime triangle). If any one of these elements is missing, crime cannot take place. This theory is informative for SCP since it shows how the elimination of any of the three components of crime can serve to reduce the opportunities for offending. Using closed-circuit television (CCTV) to improve guardianship and implementing effective guest control policies to deflect would be

offenders in building complexes are just two illustrations of some methods which focus on elements of the crime triangle.

Crime Pattern Theory (CPT) by Brantigham & Brantingham (2005) also informs SCP by explaining the regularities in crime behaviors across geographic space. This theory helps to understand the concentrations of crime particularly in time and space. Among spatial "hotspots" of crime, the theory identifies two general types. The first, crime generators, are places that attract many potential victims and offenders to the location for non-criminal purposes, like bus stops, and thus facilitate crime because of the opportunities created by their convergence. The other, crime facilitators, refer to places that are known to offenders for being a venue where crime regularly takes place. Offenders are attracted to these locations to commit crime. This theory is also insightful because it enables crime prevention policy makers and practitioners to identify locations which are in need of preventive interventions and also helps them find tailored preventive methods suitable for each area

22.5 The Methodology of SCP

Situational prevention entails a standard methodology including a systematic process of problem identification, analysis of the problem, formulation and implementation of responses, an assessment of the impact, and finally dissemination of findings. Following the identification of a crime problem, related data will be then collected and the situations which give rise to or facilitate the problem will be identified. Through analyzing the factors responsible for each specific problem, appropriate prevention tactics can be identified and implemented. Following implementation, an assessment of the impact of the intervention strategy on the occurrence of the crime problem is documented and disseminated for broader learning.

Table 1. Situational Crime Prevention Techniques

Increase the Effort	Increase the Risks	Reduce the Rewards	Reduce Provocations	Remove Excuses	
Target harden: Steering column locks and immobilisers Anti-robbery screens Tamper-proof packaging	out in group at night, leave outsine precautions: go immobilisers out in group at night, leave obbery screens er-proof packaging • Off-street parking of cender-neutral phone of directories object of the control of t		Efficient queues and polite service Expanded seating Soothing music /muted	21. Set rules: Rental agreements Harassment codes Hotel registration	
Control access to facilities: Entry phones Electronic card access Baggage screening	7. Assist natural surveillance: • Improved street lighting • Defensible space design • Support whistleblowers	12. Remove targets: Removable car radio Women's refuges Pre-paid cards for pay phones	17. Avoid disputes: • Separate enclosures for rival soccer fans • Reduce crowding in pubs • Fixed cab fares	22. Post instructions: "No Parking" "Private Property" "Extinguish camp fires"	
3. Screen exits: • Ticket needed for exit • Export documents • Electronic merchandise tags	8. Reduce anonymity: Taxi driver IDs "How's my driving?" decals School uniforms	13. Identify property: Property marking Vehicle licensing and parts marking Cattle branding	18. Reduce emotional arousal: Controls on violent pornography Enforce good behavior on soccer field Prohibit racial slurs	23. Alert conscience: Roadside speed display boards Signatures for customs declarations "Shoplifting is stealing"	
4. Deflect offenders: • Street closures • Separate bathrooms for women • Disperse pubs	9. Utilize place managers: CCTV for double-deck buses Two clerks for convenience stores Reward vigilance	14. Disrupt markets: • Monitor pawn shops • Controls on classified ads • License street vendors	19. Neutralize peer pressure: "Idiots drink and drive" "It's OK to say No" Disperse troublemakers at school	24. Assist compliance: Easy library checkout Public lavatories Litter bins	
5. Control tools/ weapons: • "Smart" guns • Disabling stolen cell phones • Restrict spray paint sales to juveniles	10. Strengthen formal surveillance: Red light cameras Burglar alarms Security guards	15. Deny benefits: Ink merchandise tags Graffiti cleaning Speed humps	20. Discourage imitation: Rapid repair of vandalism V-chips in TVs Censor details of modus operandi	25. Control drugs and alcohol: • Breathalyzers in pubs • Server intervention • Alcohol-free events	

Source: Adapted from Cornish and Clarke (2003)

22.6 Opportunity Reducing Techniques

Although the process of situational crime prevention has experienced little alteration over time, the number of opportunity reducing techniques has evolved since the beginning conception of SCP theory and practice. Today, the theoretical framework of SCP consists of 25 techniques organized around five axioms (Cornish & Clarke, 2003). The five-fold classification of situational prevention techniques includes measures for increasing efforts, increasing risks, reducing rewards, reducing provocations, and removing excuses of engaging in crime (see Table 1).

22.7 Evidence of Effectiveness¹

A review of over four decades of evaluation research provides evidence that situational prevention initiatives offer an effective way for reducing the harms of crime. Evidence of the effectiveness of SCP techniques are reflected both in individual case studies (Clarke, 1997) as well as in comprehensive reviews of evaluation studies (Guerette and Bowers, 2009 & Eck and Guerette, 2012). These reviews have utilized various classification schemes and methodologies. Some have drawn conclusions from each study (Guerette and Bowers, 2009), others have organized findings by place or intervention type (Eck and Guerette, 2012), while some others have examined most common SCP techniques, such as CCTV and street lighting (Welsh and Farrington, 2008a, b). In terms of research design, these evaluation studies have mostly used quasi-experimental design including a time-series or before-after design with comparison areas.

Having examined the SCP evaluation research within the last four decades, Guerette and Bowers (2009) came to the conclusion that three out of four (75%, n = 154) interventions had led to crime reductions overall. Twelve percent (n = 24) of situational projects had not brought about

¹ This section was adapted from Bowers and Guerette (2014).

the desired result, while 6% (n = 12) had shown mixed findings, and 8% (n =16) of the study outcomes had been inconclusive (Guerette and Bowers, 2009 & Bowers and Guerette, 2014). Another review by Eck and Guerette (2012) grouped study findings by place types accumulating a sample of 149 evaluations. This review revealed that effectiveness varied across place types; while in the aggregate 60% of interventions of all place types were found to be effective (see Table 2). At the first glance, recreational settings and public ways show the highest and lowest effectiveness rate, respectively. However, any conclusion has to be drawn considering the number of evaluation programs as increasing the number of applications increases the chance of program failure. This is also illustrated in the case of residential areas which have undergone the second highest number of failures, after public ways interventions. Given the number of successful cases, the proportion of ineffective interventions is relatively slight and ignorable (Eck and Guerette, 2012).

Table 2: Effectiveness of place-based intervention evaluations by common place types

Place Type	Percent of authors' conclusions (n)				
	Effective	Not effective	Mixed findings	Inconclusive	
Residential (39)	77 (30)	10 (4)	10 (4)	3 (1)	
Public ways (52)	62 (32)	12 (6)	19 (10)	8 (4)	
Retail (25)	88 (22)	4 (1)	4 (1)	4 (1)	
Transport (26)	88 (23)	0 (0)	8 (2)	4 (1)	
Recreational (7)	100 (7)				
Total (149)	77 (114)	7 (11)	11 (17)	5 (7)	

Source: Adapted from Eck & Guerette (2012).

In another assessment of SCP techniques' efficacy, Eck and Guerette (2012) adopted a different classification scheme and organized situational intervention types in a hierarchical order

based on their frequency of use (see Table 3). It includes seven most commonly used situational methods of crime prevention and their effectiveness rate which indicates that 79% of all 149 studies included in the review involved only seven of twenty-five situational techniques. Besides these preliminary findings, the review brings an unanticipated understanding regarding the most prevailing SCP techniques, CCTV and lighting. Given the findings, these interventions had been the lowest in efficacy and this may be explained by "the tendency to use "off the shelf" situational techniques rather than those tailored to the specific problem at hand" (Eck and Guerette, 2012).

Table 3: Effectiveness of the most used interventions

	Authors' conclusions % (n)				
Intervention	Totals	Effective	Not effective	Mixed	Inconclusive
CCTV	25 (37)	59 (22)	14 (5)	24 (9)	3 (1)
Lighting	14 (20)	55 (11)	15 (3)	15 (3)	15 (3)
CPTED	11 (16)	94 (15)			6 (1)
Mixed / other	10 (16)	93 (14)	7 (1)		
Access control	9 (14)	92 (13)			8 (1)
Place management	6 (9)	89 (8)		11 (1)	
Street redesign	4 (6)	67 (4)		17 (1)	17 (1)
Total	79 (118)	74 (87)	7 (8)	12 (14)	6 (7)

Source: Adapted from Eck & Guerette (2012).

Two separate meta-analytical reviews assessed the available research evidence of the effects of closed circuit television (CCTV) and improved street lighting on public space crime (Welsh and Farrington 2008a, Welsh and Farrington 2008b). A meta-analysis of 41 case studies which measured the impact of CCTV programs showed that this intervention had produced modest but significant reductions in crime. The findings revealed that CCTV's effectiveness varied across places and crime types as United Kingdom had experienced greater reduction in crime than the

United States and vehicle crimes in parking lots were found to be the most responsive crime type to CCTV application. In another meta-analytical study, the same methodology was used to measure the effects of street lighting interventions reported in 13 studies included in the review. The review reported that improved street lighting had significantly decreased crime while the reduction was yet greater in the UK. Moreover, the study indicated crime reductions not only in night-time but in day-time as well. Thus, a temporal diffusion of crime reduction effects as a result of improved lighting has been reported.

22.8 Methodological Challenges in SCP Evaluation

Despite the consistent promise derived from existing evidence of SCP initiatives in reducing crime opportunities, there exist several challenges in evaluating the effectiveness of situational interventions which make any conclusions about generalizing findings to other circumstances less certain. Some of these issues are inherent to situational nature of these interventions while some others emerge in other applied research evaluations as well (Bowers and Guerette, 2014). These limitations are summarized as following:

One inherent challenge of SCP evaluation is caused by the fact that situational prevention is a process, in nature. As already discussed, SCP entails a standard methodology consisting of problem identification, analysis of contributing factors, devising tailored responses for each situation, implementation of those interventions, and eventually assessment of the results. In this process-oriented scheme, every situational intervention has to be designed for a given criminal problem and address the risk factors of that specific problem. Accordingly, a randomized classical experiment which allows for elimination of possible biases by randomly assigning interventions to some places/problems is not possible.

The second challenge is also intrinsic to the situational approach as it appears in a package of several interventions rather than a single prevention technique. As such, it's not easy to make conclusive statements about the role of any single intervention technique. A third limitation of SCP evaluation research is that many evaluations are conducted retrospectively after the intervention has already been implemented. This obstructs random assignment of situational measures and results in the majority of SCP evaluations using quasi-experimental designs.

The fourth challenge stems from some prevailing issues unique to situational prevention initiatives, including crime displacement, diffusion of benefits, the possibility of anticipatory benefits, and questions of cost-effectiveness. Following situational interventions, crime may displace or move to other places, times, victims, and offenders (crime displacement). At the same time research has also found that positive impacts of preventive interventions can spread to other times and locations (diffusion of benefits). Another possibility often found in research of situational initiatives is the premature reduction in crime before interventions are put in place (anticipatory benefits). Finally, there are also questions whether preventive initiatives are worthwhile in relation to their costs (cost-effectiveness question). To assess for each of these issues in an evaluation requires different research designs and methods which creates complications for researchers.

A final challenge not unique to SCP evaluation research involves the improper use of tactics to target crime or problem behavior. An arbitrary selection and application of SCP measures without taking its theoretical framework and utilizing the standard methodology can lead to inaccurate conclusions about the effectiveness of interventions in reducing criminal problems.

22.9 Conclusion

The existing evidence of the effectiveness of situational crime prevention which draws upon four decades of empirical evaluation research suggests that this approach has much to offer. The situational approach to crime prevention, which seeks to eliminate the opportunities of crime in the immediate environments where incidents occur, has shown much success and arguably offers a more expedient method to reduce crime than traditional crime control mechanisms which focus on individual offender dispositions. This approach, similar to epidemiology in the health sciences, holds the promise of advancing current policies and practices for prevention of crime and disorder problems. Just as immunization measures seek to prevent the spread of contagious diseases, the SCP approach seeks to deploy opportunity-reducing techniques before large-scale crime problems arise. Collaborative efforts between government and private organizations and communities opens up new possibilities for the promotion and utilization of the situational crime prevention framework to reduce the harms incurred by crime.

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