

Part I

Theoretical perspectives on
crime prevention and
community safety

Taylor & Francis
Not for distribution

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

Taylor & Francis
Not for distribution

Chapter I

Theory for crime prevention

Nick Tilley and Aiden Sidebottom

Introduction

'Theory' will be used in this chapter to refer to any set of ideas on which we might act or interpret the world. We follow Karl Popper in this, who went so far as to argue that biological organisms have built-in theories setting expectations and informing behaviours. If expectations and consequential behaviours are too far off the mark, the biological organism perishes. In contrast to other organisms, human beings can, 'allow hypotheses to die in their stead' (Popper, 1972, p. 244). By this Popper means that we can invent, critically discuss and test our hypotheses empirically in advance of putting ourselves at stake by acting on them.

Popper's use of the term theory, and our accordance with this use, dissolves the frequently invoked contrast between theory and practice. It is a distinction that we find unhelpful. All practice, we argue, is washed through with theory, whether or not practitioners, policymakers or researchers acknowledge it. A chief of police commits his or her police service to 'community policing'; a householder installs a burglar alarm; a police sergeant sends patrols to a hot spot; a store owner decides to attach electronic tags to expensive goods; a local authority decides to install CCTV cameras in the city centre; the owner of a shopping mall decides to exclude bikers; a government decides to apply minimum sentences of imprisonment to those who are convicted of their third crime; a state passes laws to require that licences be obtained prior to the purchase of firearms; and a school begins restorative conferencing as a method of dealing with bullying. All these are done with the aim of preventing crime. All involve theories, as we use that term here, in the sense that they are premised on beliefs (a) that these actions will bring about their intended outcomes, (b) that any unintended negative outcomes will not outweigh the accrued benefits and (c) that the practices are normatively admissible.

To say that all crime prevention is washed through with theory does not mean that all theories and all practices reflecting these theories are equally good. Nor are those theories used to inform preventive action routinely acknowledged or made explicit. Many efforts to prevent crime derive from 'craft' theories, forged through practical and experiential learning and with little reference to more formal 'academic' theory, which is often dismissed by practitioners and policymakers as irrelevant to the realities of everyday crime prevention. Craft theories are, however, seldom formally articulated. The same is true of other fields. In healthcare improvement, for example, Davidoff and colleagues (2015, p. 229) argue that:

The key challenge for practitioners is not simply to base their work on theory (they always work from implicit assumptions and rationales, whether or not they do so consciously), but to make explicit the informal and formal theories they are actually using.

They go on to suggest that:

The need for more effective use of formal theory in improvement is increasingly pressing, because personal intuition is often biased, distorted and limited in scope and the application of formal theory enables the maximum exploitation of learning and accumulation of knowledge, and promotes the transfer of learning from one project, one context, one challenge, to the next.

(2015, p. 228)

The same might also be said of crime prevention. Bringing theories to the surface and subjecting them to critical scrutiny and empirical test is a means, as Popper argues, to developing better ways of achieving objectives including the prevention of crime. At a higher level of abstraction, it is the process through which a scientific field advances. This is a challenging task, however. There is a good deal of devil in the detail of crime prevention theory and practice and in sorting and sifting the better from worse.

In this chapter we consider what constitutes ‘good’ theory for crime prevention. We begin by proposing six requirements for a ‘good’ theory. An example of ‘good’ theory that combines these six requirements is then presented, as are the associated benefits of good theory for crime prevention. This is contrasted with practice that less fully adheres to these requirements. We then describe some of the complexities known to characterise crime prevention and which pose challenges for crime prevention theory. The ways in which broad theoretical frameworks can usefully be drawn upon to navigate these complexities is then discussed. We conclude by summarising the main points in the chapter.

Six requirements for crime prevention and community safety theories

What constitutes a ‘good’ theory? In the behavioural sciences, Davis *et al.* (2014) suggest nine criteria to judge the quality of a theory. A good theory, they argue, should (1) clearly articulate its concepts, (2) clearly specify the relationship between theoretical concepts, (3) be measurable, (4) be testable, (5) be explanatory, (6) account for the causal processes at work, (7) be parsimonious, (8) be generalisable and (9) be supported by evidence. Those in the natural sciences might add that to pass muster theory should be grounded in controlled and repeated experiments, and build on and progress that which came before it.

Criminology is awash with theory. In Chapter 2 of this *Handbook*, Felson lists 38 criminological theories. His list is avowedly incomplete. Tittle (2016) usefully organises criminological theory into seven groups: (1) theoretical science, (2) problem solving, (3) ‘verstehen’ analysis, (4) descriptive approaches, (5) critical work, (6) nihilistic thinking and (7) amelioration. Each group denotes a different way of doing criminological

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

work, often based on different underlying assumptions and involving different research methods. Tittle (2016) goes on to suggest five features of adequate criminological theory, that which (1) provides satisfactory explanation of observed phenomena ('why' and 'how'), (2) exhibits sufficient breadth to explain a wide range of relevant criminological phenomena (such as being applicable to a variety of crime types), (3) is comprehensive (accounting for all relevant causes of a phenomenon), (4) is precise (about what is causing what) and (5) exhibits sufficient depth to provide a complete account of a phenomenon's causes.

The branch of criminological theory most relevant to this *Handbook* is what Tittle (2016) calls 'problem-solving criminology'. Scholars of this orientation 'work toward finding solutions to crime and crime-related problems ... from international threats of terrorism to very focussed concerns with how best to prevent littering on public streets in particular towns or cities' (p. 11). We might then ask, what constitutes a 'good' theory for crime prevention and community safety? Listed below are six conditions that we tentatively present as criteria for 'goodness'. They are written from the perspective of a policy, practice or programme being put in place in the interests of preventing crime and/or improving community safety. Note that we deliberately refer to 'theories' rather than 'theory', to capture the need for and utility of more than one theory, the reasons for which will become obvious in what follows.

- 1 Theories must specify plausible causal mechanisms that will be activated by the policy, practice or programme.
- 2 The causal mechanisms must speak to one or more of the conditions judged to be responsible for crime genesis.
- 3 The conditions (or context) for the activation or deactivation of relevant causal mechanisms must be articulated.
- 4 Plausible causal mechanisms that are liable to produce unintended outcomes must be explicated.
- 5 The conjectured mechanism/context/outcome configurations need to be testable, by which we mean they must be open to refutation.
- 6 The normative assumptions behind the policy, practice or programme must be defensible and generally acceptable.

We now discuss each requirement in turn. We make quite extensive references to other chapters in this *Handbook* to illustrate the points being made.

Specifying plausible causal mechanisms

To effect positive change, crime prevention activities have either to deactivate/degrade crime producing mechanisms and/or introduce/strengthen mechanisms that will counter those liable to generate crime (Eckblom, 2011; Tilley and Laycock, 2002). Within this volume, for example, Clarke and Bowers present a raft of situational crime prevention measures categorised according to the mechanisms they activate or deactivate (Chapter 6), Kennedy *et al.* discuss the delivery of focused deterrence mechanisms (Chapter 8), Homel and Thomsen consider the mechanisms that may be at work in the continuation and discontinuation of criminal careers (Chapter 4) and Innes outlines mechanisms implicated in producing fear of crime (Chapter 22).

Bjorgo (2016) has listed nine general mechanisms through which crime can be prevented: (1) building moral barriers to criminal behaviour; (2) reducing recruitment into criminal social environments and activities; (3) deterrence; (4) disrupting criminal acts; (5) incapacitation (disabling crime); (6) protecting vulnerable targets; (7) reducing the harmful consequences of crime; (8) reducing the rewards from crime; and (9) desistance and rehabilitation. Although these nine general mechanisms are not all consistent with mechanism as understood in this chapter (i.e. a specification of *how* an outcome is brought about by a policy, programme or practice), notably reducing the harmful consequences of crime, which is an aim or outcome, Bjorgo’s list usefully brings out the many ways in which crime can plausibly be prevented, provided that the means can be found to activate relevant causal mechanisms. Of course, each of these general mechanisms calls for greater specification of *how* they can be activated in practice, for example, how do we ‘build moral barriers to criminal behaviour’ or ‘reduce recruitment into criminal social environments and activities’?

We argue that one measure of a good theory is whether it clearly specifies *how* the associated policy, programme or practice is expected to produce the sought-after outcome patterns.

Speaking to the essential conditions for crime genesis

Marcus Felson (Cohen and Felson, 1979; Felson, 2008; Felson and Eckert, 2016) has identified the basic conditions needed for a crime to be committed: there must be a likely offender who encounters a suitable target in the absence of anyone or anything to prevent him or her committing the offence. This means that crimes can be prevented by subtracting the likely offender or suitable target or by adding an effective intermediary, who may either protect the target (a ‘capable guardian’) or inhibit the offender (a ‘handler’). The question is then that of determining how we subtract likely offenders, for example by reducing their access to suitable targets, reducing their overall supply or reducing the crimes through which recruitment into offending takes place; how we subtract suitable targets, for example by designing products to be unusable to offenders or by removing access to them; or how we add capable guardianship or handling, for example by installing CCTV or by assigning police to places where likely offenders and suitable targets converge or by mobilising significant others (for example mothers, girlfriends, peers or teachers) to intervene when likely offenders and suitable targets converge.

For those turning to theory to inform efforts to prevent crime and improve community safety, any derived policies, programmes or practices must in some way be directed towards the spatio-temporal convergence of offender, target and guardian.

Articulating the conditions for the activation or deactivation of relevant causal mechanisms

Mechanisms are seldom activated unconditionally. Specific conditions are usually required. To produce fire, there has to be heat, fuel and an oxidiser (typically oxygen). Remove one of these conditions and the fire is extinguished. As mentioned previously, good theory should describe the causal mechanisms through which a given policy, programme and practice might plausibly produce its effects. The articulation of causal

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

1 mechanisms is one thing. Their effective activation is another, and again requires state-
2 ment in any satisfactory theory, at least in principle. Suppose a conjectured mechanism
3 is the restriction of likely offenders' (prospective burglars') access to the rear of prop-
4 erties that had alleyways to the back that provided cover for making a covert entry (a
5 version of target subtraction or protection of vulnerable targets). What are the con-
6 ditions necessary for this mechanism to prevent crime? These would include (a) the
7 identification of a method of restricting offender access, such as the installation of gates
8 that limited access to alleyways, (b) the absence of alternative methods of easy entry to
9 the same properties used by the same likely offenders and (c) likely offenders who do
10 not simply find substitute suitable targets.

11 We argue that any adequate theory for crime prevention needs to specify both the
12 mechanisms that will be activated/deactivated and the *conditions* necessary for mech-
13 anism activation/deactivation to produce the intended overall reduction of crime
14 (Pawson and Tilley, 1997).

15 ***Explicating plausible mechanisms that may produce unintended*** 16 ***outcomes***

17
18
19 As with other areas of policy and practice, measures taken in the name of crime preven-
20 tion and community safety are liable to produce unintended consequences (both
21 positive and negative), by acting in unintended ways. For example, interventions may
22 aim to reduce criminality (subtract likely offenders/reduce recruitment into criminal
23 social environments and activities), by diverting children who might otherwise offend
24 into constructive leisure activities. Here, children judged to be at high risk of commit-
25 ting crime are expected to mix with adults and fellow (low risk) children who function
26 as positive role models. However, the initiative may backfire by instead furnishing
27 otherwise law-abiding children with *criminal* role models and temptations to emulate
28 young offenders and thereby enjoy some of the benefits those children evidently yield
29 from criminal involvement (see McCord, 2003). Suppose both crime-inducing and
30 crime-inhibiting mechanisms are activated simultaneously. The net effect would be a
31 function of their balance in the context of a particular scheme.

32 Many mechanisms may be activated by interventions aiming to prevent crime, which
33 unintentionally produce multiple unintended outcomes, some positive, some benign
34 and others harmful. This is a universal characteristic of crime prevention. We argue that
35 any adequate theory for crime prevention must therefore pay attention to the unin-
36 tended consequences that may plausibly arise from the mechanisms thought to be acti-
37 vated by a policy, programme or practice.

38 ***Crime prevention theories need to be stated in ways that make them*** 39 ***open to empirical test***

40
41
42 This is a requirement of all scientific theories. Yet much crime and crime prevention
43 'theory' is not open to empirical test. It takes the form of broad interpretative frame-
44 works, such as routine activities (Cohen and Felson, 1979), '5Is' (Ekblom, 2011),
45 rational choice (Cornish and Clarke, 1986, 1987) and so on, which can easily be illus-
46 trated with selected items of 'evidence' but are not readily open to empirical refutation.
47 Almost any set of events or observations can be accommodated within the broad terms

of the theory. Popper goes so far as to say that with enough jiggery pokery any theory can be inoculated against falsification.¹ However, if a theory is to be useful in guiding practice, the theory's need to be stated in terms that make them open to criticism (and hence rejection or refinement) on the basis of empirical test. Moreover, given that falsification can always be evaded, those working in crime prevention, be they researchers, policy-makers or practitioners, need to be open to findings that suggest that their theories are mistaken or incomplete. In practice few are. An example may make the point clearer.

The 'hydraulic' theory of crime has it that unless the 'root causes' of criminality are addressed, any effort at reducing overall levels of crime is doomed to failure because if it has any effects at all, it will merely displace crime from that which has in some way been prevented into other criminal activities. This theory is readily inoculated against any apparent falsification, simply because of the wide range of displacement that an adherent of the theory can in principle invoke (spatial, temporal, tactical, target, perpetrator and crime type) or because the data drawn on are always limited and it just might be possible that the displacement has not been detected. The hydraulic theory is important because if it were true it would suggest that publicly funded preventive activity be confined either to root cause orientated prevention or to preventive efforts directed to shifting crime from the more to less vulnerable so as to achieve some form of victimisation equity. The obvious slipperiness of the hydraulic theory of crime means that apparent counter-evidence is easily evaded and hence the theory survives. The hydraulic theory can, however, be tested if it is more fully specified. Such a specified theory would need to state the particular mechanisms inexorably driving criminality, and the ways in which displacement would be expressed in any particular context for crime. In practice, tests of the hydraulic theory of crime have examined specific forms of crime (mostly property crimes), specific situational measures and specific expected expressions of displacement (mostly spatial). Suffice it to say that the conclusions are that the hydraulic theory of crime, if stated in ways that are open to falsification, is falsified, albeit that this does not mean that no forms of displacement have ever been found (Guerette and Bowers, 2009). The key question has become that of developing and testing theories about what kinds of displacement are found for what crimes in what conditions and how.

Of course, the broad interpretative frameworks available to crime prevention, even if not testable as a whole, can be very useful in informing the development of specific testable hypotheses. Rational choice is a prime example. Although commonly referred to as a 'theory', Cornish and Clarke have on several occasions reiterated that rational choice be thought of as a heuristic to inform practice and not a falsifiable theory on how offenders make decisions (see Wortley, 2013). However, any satisfactory explanatory or applied theory for crime prevention, even if inspired by a broad interpretative framework, must be specified in ways that are amenable to empirical test and, by extension, falsification.

Morally defensible and acceptable normative assumptions

Arguably more so than the previous five requirements of a good theory, this final requirement speaks more directly to the specific challenges of crime prevention and community safety. At root, crime prevention involves trying to change human behaviour. The direction of change we aim for and the ways we try to make changes

1 involve normative assumptions. Crime itself is clearly a normative construct. What is
2 considered 'criminal' in one place and time may be considered differently in another
3 place and time (Curra, 2000). Likewise, what we treat as 'crime' may be perfectly
4 normal in the sense that we quite often see examples of theft, assault, sexual abuse and
5 murder in the animal kingdom. The normative aspect of crime prevention emerges in
6 much crime prevention discourse (see, for example, Squires, Chapter 3). Here are some
7 examples of normative questions that arise in relation to crime prevention activities.
8

- 9 • How to achieve equitable outcomes: some crimes cause more harms than others
10 and some individuals and groups are more vulnerable to crime than others (Ignatans
11 and Pease, 2015; Tilley *et al.*, 2011). This raises important issues about the alloca-
12 tion of preventive resources, given that resources are always limited. The police
13 and other public service agencies are unable to do everything asked of them. This
14 means that choices have to be made. One option might be to try to reduce overall
15 numbers of crimes, another might be to reduce crime harms, a third might be to
16 focus preventive efforts in ways that aim to achieve a fairer distribution of crimes, a
17 fourth might be simply to respond to those who are making the most insistent
18 demands. Whatever practices are followed inevitably carry moral assumptions relat-
19 ing to the distribution of effort with consequences for the distribution of outcomes.
- 20 • To whom to assign responsibility: many of those competent to act in ways that
21 might prevent crime are not assigned responsibility to do so, either in relation to
22 their own vulnerability or to their behaviour as it relates to third parties (Engstad
23 and Evans 1980; Eck, Chapter 14). In many societies the police are widely
24 considered to be solely responsible for the prevention of crime despite the fact that
25 they typically do not control the conditions generating crime, which are often in
26 the hands of third parties. These third parties may include, for example, shops (e.g.
27 shop theft), bars and clubs (e.g. drunkenness, night-time violence), motor
28 manufacturers (e.g. theft of cars) and internet service providers (e.g. frauds). The
29 public may bear the costs of services (through the police, health service and local
30 authority) responding to, picking up the pieces from and trying to prevent crimes
31 produced by such third parties. Some preventive efforts are directed at leveraging
32 action by these third parties. This assumes that it is right that they should be
33 assigned responsibility for crime creation, inadvertent or not.
- 34 • Whether victim blaming is ever justified: assigning responsibility may blend into
35 victim blaming, which is widely assumed to be morally taboo. The issue is most
36 often raised in relation to rape, women and short skirts, where it is emphasised that
37 women have the right to wear what they choose and go about their lives without
38 risk or fear of male predation. The responsibility for rape (and indeed other forms
39 of assault) lies squarely with the assailant. Stated in this way the objections to victim
40 blaming are compelling. This does not mean, however, that it is sensible to
41 repudiate precautionary measures or advice that they may be taken. Indeed, failure
42 to issue precautionary advice by those competent and credible to deliver it might
43 itself be negligent. But the issue is complex and there are other areas (as in the
44 example of store layout and responsibility for shop theft) where at first sight it
45 seems reasonable to expect the business to take some responsibility for preventive
46 measures without in any way altering assumptions about the culpability of the
47 offender (see Ekblom, 1986).

- The aesthetics of crime prevention: crime prevention can sometimes be ugly, obtrusive and socially exclusive, for example where stark physical barriers are erected or where unsightly shutters are used to protect high street premises. Likewise, security devices can be awkward to use, as with mechanical immobilisers used in cars to try to prevent the steering wheel being turned or the gears engaged. Other things being equal, socially inclusive, unobtrusive measures put in place without effort and without inconveniencing people are preferable to their opposites (see Ekblom, Chapter 10). ‘Libertarian paternalism’ has emerged as a basis for selecting measures that help inconspicuously to achieve widely agreed social objectives by ‘nudging’ rather than demanding pro-social behaviour (see Halpern, 2015).

In addition to the requirements of causality, testability and falsification, crime prevention theory thus carries the added burden of being inextricably linked to decisions about what is normal, what is permissible, who is competent and who is responsible. Considering theory as a hatchery for ideas on how best to prevent crime, we argue that any adequate theory for crime prevention must give rise to policies, programmes and practices that are widely deemed to be acceptable at that particular time and place.

To further illustrate the point, let’s consider a theory that would not meet this requirement. We will call it the ‘biology is destiny’ theory, which refers to the assumption that behaviour is the direct result of an individual’s genetic endowment, that behaviour is unaffected by environmental factors and that behavioural patterns are thus immutable and fixed at birth. An overwhelming body evidence using various research strategies (most notably twin studies) shows this theory to be mistaken, demonstrating that human behaviour is an interaction between genetic predisposition and a host of other developmental and situational factors (Wortley, 2011). However, for current purposes, the more salient point is that the preventive implications arising from ‘biology is destiny’ theory – that criminality is fixed at birth and that those in possession of ‘criminal’ genes be subject to special attention – blends into territory that many would consider untenable and morally unacceptable. To be clear: this is not to say that controversial and contested approaches to prevention are ineffective or that they be dismissed out of hand. However, any theory that gives rise to such methods is more likely to invite challenge and criticism, which may in turn affect the willingness and ability of individuals and agencies to implement, maintain and evaluate interventions derived from such theories.

Good theory with benefits

In the previous section we outlined six desirable features of a theory for crime prevention. Examples were used to illustrate each feature. Let us now focus on a specific method of crime prevention and consider what a good theory might look like, according to our six requirements. For this exercise we will focus on electronic tags. Tags are a type of situational crime prevention measure (see Clarke and Bowers, Chapter 6). They are widely used in retail environments, both to reduce losses attributed to theft and to help track and authenticate products. Electronic tags comprise a particular form of product tag, which can range from large plastic tags to small magnetic strips. Tags are attached to products either at source by the manufacturer or in store by the retailer.

1 From a theft reduction perspective, electronic tags are designed to activate an alarm on
2 exiting the shop if they are not removed by staff at point of sale. Evidence on the effec-
3 tiveness of electronic tags is mixed. Farrington *et al.* (1993) and Bamfield (1994) find
4 the installation of electronic tags to be associated with positive outcome measures
5 whereas a more recent study by Hayes and Blackwood (2006) reveals little effect. Not-
6 withstanding this uncertainty as to whether tags are effective, a theory of tagging as a
7 theft reduction measure, based on our six requirements, might resemble the following:
8

- 9 • *Mechanisms*: electronic tags might plausibly reduce theft through four causal mecha-
10 nisms: (1) increasing the risk of being detected trying to exit a store with a tagged
11 item; (2) reducing the rewards derived from selling or using the stolen product;
12 (3) increasing the effort required to circumvent the tagging system and thus success-
13 fully remove the tagged item from store; and (4) in an environment where products
14 are easily accessible and concealable, tags serve to remind customers in possession of
15 an item that it is yet to be purchased, and that failure to do so will sound an alarm.
- 16 • *Necessary conditions for crime*: to use routine activity parlance, the mechanisms
17 through which electronic tags might produce reductions in theft speak mostly to
18 reductions in the availability of suitable targets (i.e. untagged products that can
19 easily be removed from stores) and boosting the capability of potential guardians
20 (by alerting store staff that an untagged product is being removed from a store).
- 21 • *Conditions for mechanism activation*: conditions relevant to the activation of the causal
22 mechanisms thought to be generated by tags include tag type (highly visible
23 conspicuous tags might better serve as a deterrent), whether the tag technology is
24 fully functioning (so the tag sounds the alarm), whether staff are motivated and
25 empowered (so that the sounding alarm is responded to), the motivation of the
26 shoplifter (determined and experienced shoplifters may be less affected by the
27 deterrent prospect of a tagging strategy) and the criminal justice system more
28 generally (to respond swiftly and act appropriately to news of a shoplifter being
29 apprehended in store).
- 30 • *Unintended outcomes*: a blanket, conspicuous tagging strategy might be interpreted by
31 patrons as evidence of high crime risk, which in turn might prompt them to shop
32 elsewhere (thus reducing sales figures). Failure by store staff to diligently remove
33 product tags might cause false alarms, which in turn might produce angry responses
34 from legitimate customers. Attempts by store staff to act on false alarms by
35 apprehending the alleged offender might result in altercation and, at worst,
36 violence.
- 37 • *Testable*: the previous three sections allow for the speculation of various context-
38 mechanism–outcome configurations (CMOCs) – what conditions are required to
39 activate what mechanisms and what outcome patterns would be expected from the
40 activation of said **mechanism**. CMOCs provide a framework for evaluation (see
41 Eck, Chapter 26). They signpost opportunities for data collection to better
42 adjudicate the mechanism(s) responsible for the observed patterns. In the case of
43 electronic tagging, for example, the increase effort mechanism assumes that tags
44 reduce theft because offenders are no longer willing or able to take the time to
45 inconspicuously remove tags in store and thus successfully exit the store without
46 sounding an alarm. If, however, it was found that there had been an increase in the
47 number of discarded tags found in store, then it is clear that this mechanism has not

been activated. Similarly, if we observe reductions in theft but an associated increase in the detection of shop thieves attempting to leave the store, we are more confident that it is some other mechanism (i.e. increase risk) that accounts for the patterns observed.

- *Normative assumptions:* the use of tags in shops comprises private action in semi-private places so may raise fewer normative issues than those that arise when crime prevention measures are taken by public bodies such as the police, government or local authority. However, the risks of false accusations and arrests of those who are deemed intentionally not to have paid for goods on the basis of tag activation; the treatment of shoppers in semi-private places as potential criminals by the use of tags signalling that they are not to be trusted; the inconvenience caused when the customer finds that a shop assistant inadvertently forgot to remove the tag; the expectation that at public expense the police will process offenders who have taken the opportunity to steal goods on public display and have been held in shops on account of tag activation; and contrariwise the acceptance that the state cannot directly prevent shop theft and hence that shops have to protect themselves by means including tags, all involve normative assumptions.

The above is an abridged theory of tagging. However, we think it safe to say that most loss prevention managers, when asked why they adopt a tagging strategy in their store, would allude to the points raised above. Though the terms would surely be different, the core concepts that make up our theory of tagging would likely be consistent with the reasons put forward by those responsible for implementing and maintaining a tagging strategy. We have already argued that this is true of much crime prevention: decisions to prevent crime are grounded in assumptions on what is giving rise to the presenting problem and how the proposed intervention might in some way reduce the problem or ameliorate its harms. What, then, are the benefits of surfacing craft theories to better accord to our requirements of good theory and subsequently subject them to empirical test?


At this point it is important to emphasise that avowedly theoretically informed crime prevention policy and practice of the sort called for here is not required for success. On the contrary, crimes can be prevented and communities made safer by activities that are grounded in experience and anecdote and which make little use of, nor bear resemblance to, the type of theory we are advocating. To those who are responsible for preventing crime in a given area, event or facility, this is all that matters; the bottom line is crime prevention not adherence to crime prevention theory. However, localised success does not a science make. For those interested in a science of prevention, one which accumulates knowledge and theories that are generalisable in the face of ever changing conditions for crime and its prevention, it is important to elicit, articulate and repeatedly test those theories thought to underpin effective interventions, as well as those that don't and might therefore require correction or abandonment. This iterative process of surfacing and testing theories calls for policymakers, practitioners and researchers to work jointly. There are many benefits of doing so. Following Davidoff *et al.* (2015), these benefits include: (1) interventions can more accurately be assessed on their applicability to novel settings and problems; (2) successful and relevant interventions can more faithfully be replicated and scaled-up; and (3) the process of formulating preventive responses can be accelerated through making use of theory known to have produced

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

1 effective interventions elsewhere. There is much to be said for the ‘co-production’ of
2 tested and transferable theory, where policymakers and practitioners work alongside
3 researchers to articulate and test the often unspoken ideas and assumptions that lie
4 behind what is delivered with the aim of preventing crime (see Tompson and Knuts-
5 son, forthcoming).
6


7 **Doing relatively atheoretical crime prevention**

9 We argued earlier that all crime prevention is washed through with theory. However,
10 some prevention activities are ‘theory light’, in that none or rather few of the require-
11 ments that were laid out earlier are met.

12 Risk-based crime prevention is an example of a relatively atheoretical approach.
13 Strictly it meets none of the requirements of a theory that we have specified. ‘Risk’ and
14 ‘protection’ factors are identified and policies and practices are orientated to reducing
15 the risk factors and enhancing the protective ones. Risk and protective factors are well-
16 established correlates respectively of criminality and non-criminality. The acknow-
17 ledged assumption is that these ‘risk factors’ and ‘protective factors’ are more than
18 markers for causal mechanisms: they are directly related to them, such that their intro-
19 duction (or removal) will affect criminal involvement. In health, too, correlates
20 sometimes used with little or no understanding of (or in some cases interest in) 
21 when considering the efficacy and effectiveness of treatments. ‘What works’ and ‘What
22 doesn’t work’ is assessed pragmatically in terms of carefully measured associations with
23 net outcomes of trials, where threats to the internal validity of findings have been
24 removed through random allocation to differing arms of the trial (say no treatment,
25 placebo, alternative treatments). In health in particular trials of these kinds have been
26 credited with avoiding net harm-inducing treatments and disseminating those that on
27 balance improve health.

28 Does this mean that theory of the sort we have described is redundant or unimpor-
29 tant? We think not. Moreover, we believe that most of those involved in health care
30 and crime prevention would agree with us. This is why. Whilst the net outcomes of an
31 intervention may be positive or negative, this generally masks real heterogeneity in the
32 effects produced and the mechanisms producing them. This heterogeneity in mecha-
33 nisms and effects is a function of the heterogeneity of the context for the intervention
34 (broadly defined as the varying social and physical conditions for the delivery and
35 receipt of the measures in question). Progress is achieved in improved effectiveness,
36 better use of resources and the avoidance of inadvertent harms from a given interven-
37 tion by better understanding the ways in which it works out in practice amongst
38 varying subgroups in different conditions. This, in turn, if it is to inform judgements
39 about future applications of the treatments in novel conditions, calls for a general and
40 tested theory of an intervention’s CMOCs.

41 Sometimes undesirable behaviours can be successfully averted, but the connection
42 between the measure and outcome is not immediately obvious or intentional. At first
43 sight it might be assumed that crime prevention turns on removing the ‘root causes’ of
44 criminal behaviour or by making criminal behaviour impossible. This is not always the
45 case, at least as cause is normally understood. Take suicide. It was found that reducing
46 the toxicity of the domestic gas supply in the UK led to a substantial overall reduction
47 in the number of suicides roughly in parallel with the reduction in the numbers of

suicides involving gas (Clarke and Mayhew, 1988). It would seem perverse to treat the national gas supply as a cause of suicide, even though the removal of that particular means of suicide led to an overall reduction, despite there being plenty of other means of committing suicide. Likewise, the law requiring that motorcycle helmets be worn led to a large reduction in theft of motorcycles (Mayhew *et al.*, 1989). Yet again it would seem perverse to say that the lack of a law requiring that motorcyclists wear helmets *caused* motorcycle theft. Moreover, the motorcycle was no less open to theft once the helmet-wearing legislation was enacted. In both cases, the measures producing the unintended preventive effects triggered preventive mechanisms that spoke not to the underlying  of the behaviours averted, but simply restricted the available means (see Ekblom and Tilley, 2000).

The complexity of crime prevention

Crime prevention is complex in ways that present challenges to the formulation of adequate theories (Ekblom, 2011). First, both criminal and crime prevention activities have both distal and proximal causes (see Ekblom, 1994; Wortley, 2011). The immediate conditions for crime and crime prevention comprise proximal causes. These proximal causes can, at least in principle, be traced back to more distant (distal) origins which themselves generate the proximal causes. These distal causes can be remote in time and/or place and/or personnel. Take car theft. The immediate causes of a car being stolen have to do with the co-presence of a car that the car thief wants to and can steal without anyone there to stop him or her. The more distal causes include the design of the car, the invention of the car, the provision of places to leave the car, the development of tools and techniques to steal the car, the prospective car thief's social background that led to their disposition to steal the car, the company kept by the car thief and the thief's moral sensibilities concerning the theft of cars. Further back in the causal chain are regulations covering the design of cars, the technological means available to steal cars or make them more difficult to steal, the design of cities or other spaces where cars may be found, the patterns of social inclusion and exclusion that generate the supply of those disposed to commit crime, the promotion of driving fast cars as sources of joy and status, the provisions for registering cars and switching ownership, insurance policies that take account of car theft rates, provisions for policing car crime and so on. The prevention of car theft is clearly not contingent on intervening in all these causal factors. Nevertheless, it is worth highlighting that car theft and the prevention of car theft, as with any other crime, lies within an extensive network of near and distant causal forces.

Second, the network of causal forces operating on crime and crime prevention is apt to change. In the example of car theft, this occurs with, say, technological innovation, changes in social policy, legislative developments, economic movement, the construction of new places where cars may be parked and so on.

Third, crime prevention is apt to change conditions for its own effectiveness, where offenders in particular, adapt to preventive interventions and alter their effectiveness. Paul Ekblom (1997, 1999) has written famously about the 'arms race' between offenders and crime preventers as each adjusts to the other – the offenders learning to overcome preventive endeavours and the preventer trying to thwart the offender. But, others may also adapt, for example if victims perceive their risks to be

1 diminishing and thereby take fewer precautions and in doing so create more oppor-
2 tunities for offenders.

3 Fourth, and as mentioned previously, what is construed as ‘crime’ is a social con-
4 struct and is therefore liable to change (for example, see Walsh, 1994). Moreover, even
5 where definitions of crime remain the same, what is focused on as priorities for preven-
6 tive attention may change over time. In the UK, again taking car theft as an example,
7 in the late 1980s and early 1990s when theft rates were very high it received extensive
8 attention (see Webb and Brown, Chapter 16), but with heavily reduced rates and
9 growing concerns about domestic abuse, focus on the latter progressively increased.
10 Indeed, in 2016, a new UK offence of coercive control was created, which now forms
11 a focus of preventive attention, which was not present earlier. More generally, the
12 emergence of the Internet has created a range of new offences and changed scope to
13 commit old ones that have altered constructions of crime and crime priorities for pre-
14 ventive attention (see Williams and Levi, Chapter 21).

15 Fifth, responsibility and competency for crime prevention are widely divided from one
16 another. The police have traditionally been assigned responsibility for preventing crime,
17 while they lack the competency to deliver many measures that create and could prevent
18 it. By ‘competency’ we mean here the ability to apply many preventive measures. Those
19 competent in this sense may include, for example again in relation to car theft, manufac-
20 turers, designers of car parks, proprietors of car parks, administrators of car registration
21 arrangements, drivers of cars and so on. This means that the responsible body (the police
22 and any other partners given statutory responsibilities) have to work out how to persuade
23 those competent to implement preventive measures to do so (see Laycock, 2004).

24 Sixth, the delivery of crime prevention typically involves multiple partners and mul-
25 tiple stages. Here we return to the example of gating alleys to prevent rear-access burg-
26 laries to terraced (row) housing. A systematic review by Sidebottom and colleagues
27 (2015) shows that effective implementation of alley gates involves consultation with and
28 consent from those whose properties are adjacent to gated alleys, commitment from
29 affected residents to routinely and diligently operate and close alley gates, agreement
30 from local service providers and the emergency services that the gating of alleyways will
31 not compromise service delivery (such as refuse collection or graffiti removal), and
32 assurances from those responsible for maintaining alley gates that they remain fully func-
33 tional. Failure to successfully mobilise these different partners may alter the conditions
34 necessary to activate the causal mechanisms through which alley gating is expected to
35 produce its effects. Crime prevention is replete with such implementation failures (see
36 Ekblom, 2011; Laycock and Tilley, 1995).

37 38 **Frameworks to help navigate the complexities of crime** 39 **prevention**

40
41 Up to this point, the theory we have discussed in this chapter might best be described
42 as *programme theory*: that which sets out the underlying assumptions, form and expected
43 workings and outcome patterns of a particular policy, programme or practice imple-
44 mented in the interests of crime prevention and community safety. This is but one type
45 of theory. We agree with Pawson (2009) that programme theories share many of the
46 characteristics of that better known class of theories made famous by Robert Merton,
47 namely middle-range theories, defined as:

Theories that lie between the minor but necessary working hypotheses that evolve in abundance during day-to-day research and the all-inclusive systematic efforts to develop a unified theory that will explain all the observed uniformities of social behaviour, social organization and social change.

(Merton, 1967, p. 39; see also Felson, Chapter 2)

We have already laid out the advancements contingent on routinely articulating and testing these theories.

Yet there are also broader conceptual frameworks that can usefully be drawn on in the service of crime prevention and community safety. These sit at higher levels of abstraction. They are not limited to particular contexts, problems, policies, programmes or practices. Their breadth makes accurate measurement and testing difficult, and in some cases inappropriate. Nonetheless, these overarching theories are important because they speak to the abovementioned complexities known to bedevil crime prevention practice. They can therefore be used to build and refine prevention-minded middle-range theories of the sort we have discussed here.

In this section we present four such frameworks that have been devised to help work out what to do in crime prevention. They comprise a series of heuristics that complement rather than contradict one another.

Problem-oriented policing/partnership

Problem-oriented policing (POP) was devised by Herman Goldstein (1979, 1990). In the UK ‘partnership’ often replaces policing for the second ‘P’, following legislation making the formation and operation of local crime prevention partnerships a statutory responsibility. For Goldstein, POP described a philosophy of policing, encompassing an account of the responsibilities of policing as well as an account of how it should operate. Eck and Spelman (1987) devised SARA as an acronym to capture what is involved in delivering effective POP, and it has been adopted by many of those involved in crime prevention (see Sidebottom and Tilley, 2011). SARA refers to Scanning, Analysis, Response and Assessment. Scanning involves identifying specific problems for preventive attention, including new ones that emerge with technological and social developments. Analysis involves the formation and testing of conjectures concerning the conditions generating or enabling those problems, in order to find practicable intervention points. Response involves putting in place strategies and tactics that relate to the identified intervention points. Assessment involves learning lessons from what has been done (both failures and successes) both to know whether more action is required and to inform future work. Although as described here SARA appears to be a linear process, it should be understood as one where later ‘stages’ feed back into earlier ones in iterative ways.

SARA draws on theories of crime prevention, as described earlier. It is presented here as a useful framework for working out what to do about specific crime problems, which has led to much effective crime prevention work (see Weisburd and Eck, 2004).

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

Leverage

Herman Goldstein and Michael Scott (Scott, 2005; Scott and Goldstein, 2005) have written about the ways in which leverage of different kinds can be applied to those competent to prevent crime even when they have no formal responsibility for doing so. They have produced a hierarchy of levers with the general advice that those at the top are preferable to those further down because they are easier to apply and because there is less fall-out in terms of threats to the rights of those on whom the levers are applied. Levers can be applied to those in control of more distal causes of crime, sometimes referred to as 'supercontrollers' (see Sampson *et al.*, 2009).

Evolution

Paul Ekblom's (1997, 1999; Ekblom and Pease, 2014) work on the arms race in crime prevention has already been mentioned. It is useful to bear the adaptability of offenders in mind. They are not passive objects of preventive activity, akin to billiard balls responding to the cues used to propel them. The cues provided by social intervention are different. They are interpreted by intentional agents who adapt and adjust to preventive interventions in strategic ways. This has several implications. One is that those interested in prevention need to try to anticipate forms of adaptation to try to pre-empt them. A second is that diverse preventive interventions may be preferable to attempts to identify simple, single solutions that once overcome render targets highly vulnerable. A third is that of putting in place provision for monitoring crime patterns to spot

1. Educating others regarding their responsibility for the problem
2. Making a straightforward informal request of some entity to assume responsibility for the problem
3. Making a targeted confrontational request of some entity to assume responsibility for the problem
4. Engaging another existing organisation that has the capacity to help address the problem
5. Pressing for the creation of a new organisation to assume responsibility for the problem
6. Shaming the delinquent entity by calling public attention to its failure to assume responsibility for the problem
7. Withdrawing police services relating to certain aspects of the problem
8. Charging fees for police services related to the problem
9. Pressing for legislation mandating that entities take measures to prevent the problem
10. Bringing a civil action to compel entities to accept responsibility for the problem

Figure 1.1 Methods of police pressure on others to accept responsibility for community problems.

Source: Scott, 2005.

adaptation early and adapt to it speedily. A fourth is to pursue strategies that reduce disposition on the grounds that if successful they will reduce the supply of those who will try to adapt.

Signal crimes

Community safety policy and practice has been orientated to reducing the quality of life consequences of crime as well as crime itself. This concern has expressed itself in terms of public reassurance and reduction of fear of crime and the effects the latter can have on what people feel they can do, for example by way of going out. The measurement of fear of crime in particular, has been fraught with difficulties (Farrell *et al.* 1997). Research has suggested that the underlying theory that the main emotional response to crime is fear had been challenged by findings that anger is more common. Nevertheless, there continue to be concerns with the way perceptions of crime may adversely affect citizens' quality of life, and an interest in developing strategies that address this.

Martin Innes' work on signal crimes provides a useful framework for just this (Innes, 2004; Chapter 22). A key feature of this is the notion that what comprise cues giving rise to harmful subjective experiences of crime varies from place to place. In other words, the context for subjective experience is crucial to it. The practical import is that if we want to address fear of crime, problems of public reassurance or any other negative consequences of crime for quality of life, we need locally to work out the cues to those responses and try to intervene in ways that remove mechanisms that give rise to those feelings and activate those that reassure. In practice, for example, this might mean that in one area it is important to remove graffiti but in another to add visible uniformed patrols to achieve the same reassurance objective.

Conclusion

This chapter has argued (a) that theory in crime prevention is unavoidable and ubiquitous, (b) that a good theory for crime prevention has to meet six requirements, (c) that some successful crime prevention is relatively light but would improve if the theory met the requirements laid out in (b), (d) that crime prevention (and associated theory) does not necessarily turn on intervening in the causes of crime, (e) that crime prevention is intrinsically complex and (f) that there are some general frameworks that help researchers and practitioners navigate that complexity.

Note

1 Imre Lakatos (1976) illustrates this amusingly in mathematics in showing responses to apparent falsifications of Euler's theorem to the effect that for all polyhedra $V - E + F = 2$, where V refers to Vertices, E refers to Edges and F refers to Faces. Solid figures not according to the formula were barred as 'monsters'.

References

- Bamfield, J. (1994) Electronic article surveillance: Management learning in curbing theft. In: M. Gill (ed.) *Crime at Work*. London: Perpetuity Press, pp. 155–173.
- Bjorgo, T. (2016) *Preventing Crime: A Holistic Approach*. Basingstoke: Palgrave.

- 1 Clarke R.V. and Mayhew, P. (1988) The British gas suicide story and its criminological implica-
2 tions. In: M. Tonry and N. Morris (eds) *Crime and Justice*, vol. 10. Chicago, IL: University of
3 Chicago Press, pp. 79–116.
- 4 Cohen, L.E. and Felson, M. (1979) Social change and crime rate trends: A routine activity
5 approach. *American Sociological Review*, 44(4): 588–608.
- 6 Cornish, D. and Clarke, R.V. (eds) (1986) *The Reasoning Criminal*. New York: Springer.
- 7 Cornish, D. and Clarke, R.V. (1987) Understanding crime displacement: An application of
8 rational choice theory. *Criminology*, 25: 933–947.
- 9 Curra, J. (2000) *The Relativity of Deviance*. Thousand Oaks, CA: Sage.
- 10 Davidoff, F., Dixon-Woods, M., Leviton, L. and Michie, S. (2015) Demystifying theory and its
11 use in improvement. *BMJ Quality and Safety*, 24: 228–238.
- 12 Davis, R., Campbell, R., Hildon, Z., Hobbs, L. and Michie, S. (2014) Theories of behaviour
13 and behaviour change across the social and behavioural sciences: A scoping review. *Health Psy-
14 chology Review*, 8: 1–22.
- 15 Eck, J.E. and Spelman, W. (1987) *Problem-solving: Problem-oriented Policing in Newport News*.
16 Washington, DC: Police Executive Research Forum.
- 17 Ekblom, P. (1986) The prevention of shop theft: An approach through crime analysis. Crime
18 Prevention Unit Paper No. 5, Home Office, London.
- 19 Ekblom, P. (1994) Proximal circumstances: A mechanism-based classification of crime preven-
20 tion. *Crime Prevention Studies*, 2: 185–232.
- 21 Ekblom, P. (1997) Gearing up against crime: A dynamic framework to help designers keep up
22 with the adaptive criminal in a changing world. *International Journal of Risk, Security and Crime
23 Prevention*, 2: 249–265.
- 24 Ekblom, P. (1999) Can we make crime prevention adaptive by learning from other evolutionary
25 struggles? *Studies on Crime and Crime Prevention*, 8, 27–51.
- 26 Ekblom, P. (2011) *Crime Prevention, Security and Community Safety Using the 5Is Framework*. Bas-
27 ington: Palgrave Macmillan.
- 28 Ekblom, P. and Pease, K. (2014) Innovation and crime prevention. In: G. Bruinsma and D.
29 Weisburd (eds) *Encyclopedia of Criminology and Criminal Justice*. New York: Springer,
30 pp. 2523–2531.
- 31 Ekblom, P. and Tilley, N. (2000) Going equipped: Criminology, situational crime prevention
32 and the resourceful offender. *British Journal of Criminology*, 40: 376–398.
- 33 Engstad, P. and Evans, H. (1980) Responsibility, competence and police effectiveness of crime
34 control. In: R. Clarke and M. Hough (eds) *The Effectiveness of Policing*. Farnborough: Gower,
35 pp. 139–162.
- 36 Farrell, S., Bannister, J., Ditton, J. and Gilchrist, E. (1997) Questioning the measurement of the
37 ‘fear of crime’: Findings from a major methodological study. *British Journal of Criminology*,
38 37(4): 658–679.
- 39 Farrington, D.P., Bowen, S., Buckle, A., Burns-Howell, T., Burrows, J. and Speed, M. (1993)
40 An experiment on the prevention of shoplifting. In: R.V. Clarke (ed.) *Crime Prevention Studies*,
41 vol. 1. Monsey, NY: Willow Tree Press.
- 42 Felson, M. (1986) Linking criminal choices, routine activities, informal control and criminal out-
43 comes. In: D. Cornish and R. Clarke (eds) *The Reasoning Criminal: Rational Choice Perspectives
44 on Offending*. New York: Springer, pp. 119–128.
- 45 Felson, M. (2008) Routine activity approach. In: R. Wortley and L. Mazerolle (eds) *Environ-
46 mental Criminology and Crime Analysis*. Portland, OR: Willan Publishing, pp. 70–76.
- 47 Felson, M. and Eckert, M. (2016) *Crime and Everyday Life*, 5th edn. Los Angeles, CA: Sage.
- Goldstein, H. (1979) Improving policing: A problem-oriented approach. *Crime and Delinquency*,
25: 236–258.
- Goldstein, H. (1990) *Problem-oriented Policing*. New York: McGraw Hill.

- Guerette, R.T. and Bowers, K. (2009) Assessing the extent of crime displacement and diffusion of benefit: A systematic review of situational crime prevention evaluations. *Criminology*, 47(4): 1331–1368. 1
- Halpern, D. (2015) *Inside the Nudge Unit: How Small Changes can make a Big Difference*. London: Allen. 2
- Hayes, R. and Blackwood, R. (2006) Evaluating the effects of EAS on product sales and loss: Results of a large-scale field experiment. *Security Journal*, 19, 262–276. 3
- Ignatans, D. and Pease, K. (2015) Distributive justice and the crime drop. In: M. Andresen and G. Farrell (eds) *The Criminal Act: Festschrift for Marcus Felson*. London: Palgrave Macmillan, pp. 77–87. 4
- Innes, M. (2004) Signal crimes and signal disorders: Notes on deviance as communicative action. *British Journal of Sociology*, 55(3): 335–355. 5
- Lakatos, I. (1976) *Proofs and Refutations: The Logic of Mathematical Discovery*. Cambridge: Cambridge University Press. 6
- Laycock, G. (2004) The UK car theft index: An example of government leverage. *Crime Prevention Studies*, 17: 25–44. 7
- Laycock, G. and Tilley, N. (1995) Implementing crime prevention. In: M. Tonry and D. Farrington (eds) *Building a Safer Society. Crime and Justice*, vol. 19. Chicago: University of Chicago Press, pp. 535–584. 8
- McCord, J. (2003) Cures that harm: Unanticipated outcomes of crime prevention programs. *Annals of the American Academy of Political and Social Science*, 587: 16–30. 9
- Mayhew, P., Clarke, R. and Elliott, D. (1989) Motor cycle theft, helmet legislation and displacement. *Howard Journal*, 28(1): 1–8. 10
- Merton, R. (1976) On sociological theories of the middle-range. In: R. Merton (ed.) *On Theoretical Sociology: Five Essays Old and New*. New York: Free Press, pp. 39–72. 11
- Pawson, R. (2009) Middle range theory and programme theory evaluation: From provenance to practice. In: J. Vaessen and F. Leeuw (eds) *Mind the Gap: Perspectives on Policy Evaluation and the Social Sciences*. New Brunswick, NJ: Transaction Press, pp. 171–202. 12
- Pawson, R. and Tilley, N. (1997) *Realistic Evaluation*. London: Sage. 13
- Popper, K. (1972) *Objective Knowledge*. Oxford: Clarendon Press. 14
- Sampson, R., Eck, J.E. and Dunham, J. (2009) Super controllers and crime prevention: A routine activity explanation of crime prevention success and failure. *Security Journal*, 23(1): 37–51. 15
- Scott, M. (2005) Shifting and sharing responsibility to address public safety problems. In: N. Tilley (ed.) *Handbook of Crime Prevention and Community Safety*, 1st edn. London: Routledge, pp. 385–409. 16
- Scott, M.S. and Goldstein, H. (2005) Shifting and sharing responsibility for public safety problems. US Department of Justice, Office of Community-oriented Policing Services, Washington, DC. 17
- Sidebottom, A. and Tilley, N. (2011) Improving problem-oriented policing: The need for a new model? *Crime Prevention and Community Safety*, 13(2): 79–101. 18
- Sidebottom, A., Tompson, L., Thornton, A., Bullock, K., Tilley, N., Bowers, K. and Johnson, S.D. (2015) *Gating Alleys to Reduce Crime: A Meta-Analysis and Realist Synthesis*. Available online at: http://whatworks.college.police.uk/About/Documents/Alley_gating.pdf. 19
- Tilley, N. and Laycock, G. (2002) Working out what to do: Evidence-based crime reduction. Crime reduction Research Series Paper 11, Home Office, London. 20
- Tilley, N., Tseloni, A. and Farrell, G. (2011) Income disparities of burglary risk and security availability over time. *British Journal of Criminology*, 51(2): 296–313. 21
- Tittle, C.R. (2016) Introduction: Theory and contemporary criminology. In: A. Piquero (ed.) *The Handbook of Criminological Theory*. Chichester: Wiley-Blackwell, pp. 1–18. 22
- Tompson, L. and Knutsson, J. (forthcoming) *Advances in Evidence Based Policing*. London: Routledge. 23

- 1 Walsh, D. (1994) The obsolescence of crime forms In: R.V. Clarke (ed.) *Crime Prevention Studies*,
2 vol. 2. Monsey, NY: Willow Tree Press, pp. 149–163.
3 Weisburd, D. and Eck, J.E. (2004) What can the police do to reduce crime, disorder and fear?
4 *Annals of the American Academy of Social and Political Sciences*, 593: 42–65.
5 Wortley, R. (2011) *Psychological Criminology*. London: Routledge.
6 Wortley, R. (2013) Rational choice and offender decision making: Lessons from the cognitive
7 sciences. In: B. Leclerc and R. Wortley (eds) *Cognition and Crime: Offender Decision Making and*
8 *Script Analyses*. London: Routledge, pp. 237–251.
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47

Taylor & Francis
Not for distribution