Appropriate Complexity: Capturing and Structuring Knowledge from Impact and Process Evaluations of Crime Reduction, Community Safety and Problem-Oriented Policing

Final prepublication version – printed version may differ

Paul Ekblom

Ekblom, P (2007) 'Appropriate Complexity: Capturing and Structuring Knowledge from Impact and Process Evaluations of Crime Reduction, Community Safety and Problem-Oriented Policing', in E. Hogard, R. Ellis and J. Warren (Eds.) *Community Safety: Innovation and Evaluation*, Chester: Chester Academic Press.

Abstract

The persistence of implementation failure in large-scale programmes and individual projects of crime reduction, community safety and Problem-Oriented Policing is a serious issue. This chapter argues that a major reason for this failure is oversimplification of the knowledge on which those programmes and projects are built, the inadequate capture of that knowledge through both impact and process evaluation and inadequate sharing of the information through the structure, concepts and terminology of the knowledge base. Together, these constrain the performance of national and local policymakers, those responsible for delivery systems, and practitioners.

Frameworks are described for systematically capturing this kind of information in ways which attempt to apply *appropriate* levels of complexity for users at these respective levels. At the practice end are the *Five Is,* covering the preventive process, allied with the *Conjunction of Criminal Opportunity*, covering causes of crime and interventions in those causes. These are described and illustrated with a brief case study description, followed by a concluding discussion of the issue of complexity versus simplicity in community safety, and the wider requirements of investment in organisational support, knowledge, training and infrastructure to routinely enable action that is *sophisticated enough to make a difference* to crime and safety.

Keywords: complexity, evaluation, community safety, Problem-Oriented Policing, crime reduction, crime prevention, 5Is, Conjunction of Criminal Opportunity, SARA, Crime Triangle.

'Damn!' David Birley, delivery expert attached to Home Office Crime Prevention Unit, circa 1987, on being told that a conference had concluded crime prevention was 'a lot more complicated than people had thought'. Plus ça change.

Introduction

Many commentators have pointed to a history of implementation failure in crime reduction, community safety or Problem-Oriented Policing[1] (eg Bullock and Tilley 2003; Homel et al 2004; Knutsson 2003; Goldstein 2003, Townley et al 2003; Scott 2003; Hough in this volume), and have attributed it to various factors such as deficient project management skills, short-term funding and over-centralised management, limited analytic capacity and unsupportive organisational context. (Resistance to evaluation itself among practitioners is also an issue but is not covered here.) In this chapter I focus on alternative, though not necessarily exclusive, diagnoses centring on the limitations of the kinds of *knowledge* collected by, and applied from, impact and process evaluations of community safety actions. These limitations constrain the performance of those responsible for decisions and actions ranging from strategic policy to tactical practice. Being aware of the limitations is particularly important because of the weight placed on building the body of of case study evaluations both by leading figures in Problem-Oriented Policing (Goldstein 2003, Scott, 2003, Eck 2003), and UK efforts to assemble knowledge for practice (www.crimereduction.gov.uk/ipak01.htm). One common underlying theme is the failure to handle the *complexity* of choice, delivery and action that creating and maintaining community safety requires.

This chapter first discusses the purpose of evaluation, the relationship between evaluation and knowledge, and the particular significance of *know-how of the process* of doing community safety. It then focuses on two aspects of that process: 1) the *strategic policy choices* made both nationally and locally in selecting interventions to roll out and implement; and 2) *replication and innovation.* In each case, limitations of evaluation and the knowledge to which it contributes are discussed, and specifications proposed to overcome these limitations and consequently improve performance. On the practice level particularly, existing knowledge frameworks, especially SARA and the Crime Triangle, are then reviewed and found wanting; and the 5Is and Conjunction of Criminal Opportunity are suggested as replacements. The chapter finishes with a discussion of complexity and the wider organisational context necessary to support more sophisticated policy and practice, and makes the case for a 'high investment, high yield' approach to community safety.

The purpose of evaluation

From an applied perspective, the immediate purpose of scientific evaluation in community safety (as in other fields) is to systematically and rigorously collect knowledge about the consequences of choices and actions in the *past* to help guide the choices and actions of the *future*, such that performance is consistently and sustainably

[1] Hereafter for brevity 'community safety' refers also to crime reduction and Problem-Oriented Policing; antisocial behaviour is included along with crime.

optimised against some set of well-defined and measurable criteria.[2] This is true whether the choices and actions are at the level of *policy* (essentially strategy, whether national or local); *practice* (eg tactical details of how best to install alley-gates to reduce burglary); or the in-between zone of making it all happen commonly referred to as *delivery* (eg capacity building for community safety action including training, knowledge management, organisational design and other infrastructural issues).

Other purposes of evaluation include contributing to *public affairs* – giving account of those choices and actions to funders and other stakeholders, including taxpayers; and *research* – testing theory through attempted manipulation of causes, and gleaning wider knowledge of the nature and context of the crime problems tackled in any preventive action. Other immediately practical tasks related to evaluation are *monitoring,* a mainly internal feedback and adjustment process to ensure implementation is on track; and *performance measurement*, which provides information to external bodies to guide the delivery process (as well as supporting accountability), but which does not normally scientifically investigate cause and effect.

The main emphasis in this paper is on the *applied* side of evaluation proper, but as will be seen theory plays a major role here too.

Evaluation and knowledge

Evaluations can contribute to a range of types of applicable knowledge about crime and its prevention (Ekblom 2002a; Nutley et al., 2003):

- **Know-about** crime problems, and their costs and wider consequences for victims and society; offenders' modus operandi, legal definitions of offences, patterns and trends in criminality, risk and protective factors... and theories of causation.
- **Know-what** works – what methods work, against what crime problem, in what context, with what side-effects and what cost-effectiveness.
- **Know-who** to involve and how – contacts for advice, potential partners and collaborators who can be mobilised as formal or informal preventers; service providers, suppliers of funds and equipment and other specific resources; and sources of wider support.
- **Know-when** to act – knowing the right time to make particular moves – the climate must be right, other initiatives need to be coordinated with etc.
- **Know-where** to target and distribute resources.
- **Know-why** – covering the symbolic, emotional, ethical, cultural, political and value-laden meanings of crime and reductive action, including fairness and justice. Failure to address these issues can cause even the most rational and evidence-based actions to be rejected. The classic example is the public outrage sometimes caused by expensive sporting activities for young offenders which may be difficult to gain acceptance for even with (putative) evidence of cost-effectiveness.

[2] The means to this end, the scientific/statistical process of causal inference and the economic process of assessing cost effectiveness, are not covered here. See eg Ekblom and Pease 1995; Sherman et al 1997; Bowles and Pradiptyo 2004.

- **Know-how** to put into practice – knowledge and skills of implementation and other practical processes, and methodologies for research and analysis.

Know-how – the process of doing community safety

Know-how is, in effect, of a different order from the other kinds of knowledge in that it draws them all together in the *process* of doing community safety. From the perspective of the *users* of evaluation findings (whether practitioners, those responsible for directing delivery at a higher level, or those who formulate local or national policy) knowledge and technical skill are required to help:

- *Define* the crime/safety problem, if this is not already clear.
- *Select* intervention methods, which are evidence-based (ie derive from good-quality evaluations already conducted); suitable to tackle the targeted crime problems in their particular contexts; and in line with the priorities and available resources of the responsible organisation/s.
- *Replicate* the methods – converting (usually) written accounts and instructions originating from evaluations into practical action, whether a single project or the roll-out of an entire programme built around a particular model or method.

There will, however, be many occasions when no direct evaluation finding fits, or can be generalised to supply the necessary information. This may be due to the paucity of evaluation material, especially that which is reliable (Sherman et al 1997); the marked context-dependency of crime reduction activity (Tilley 1993a; Ekblom 2002a) and the great variety of contexts to be adapted to; and the tendency of social and technological change and co-evolving offenders to render what once worked, obsolete (Ekblom 1997, 1999, 2002a). An incomplete evidence base is therefore inevitable, meaning that the knowledge we obtain and assemble through evaluation should also be deliberately designed to enable practitioners and policy-makers to:

- *Innovate* – a requirement more fundamental than might otherwise be thought because the context-dependency just described means that virtually every replication involves some measure of innovation followed, ideally, by monitoring, feedback and adjustment. Innovation in turn has to draw on two things:
    - High-level *principles of intervention* which can generate plausible new ideas where there is no specific evidence base. Such principles will usually derive from theories, or combinations of theories. To the extent that evaluation itself is able to test and refine these theories through the manipulation and attribution of causes, it can help build the theoretical platform for innovation.
    - Details of *practical methods* whose elements can be recombined in different ways to realise existing kinds of intervention in new contexts, or new kinds of intervention altogether. Capturing and assessing this information is another function of evaluation.

Evaluation, knowledge and performance are therefore intimately intertwined. To the extent that evaluations can draw on existing theory and knowledge of detailed causal mechanisms (Pawson and Tilley 1997; Tilley 1993b), they can pose sharper, more searching questions, and deliver tighter evidence that can better be applied. (In this respect, the relationship between theory and evaluation is less a one-sided affair and

more like that between a river and its banks.) Both *impact* and *process* evaluation however have demonstrated quite serious limitations in the sorts of information they capture, which have, I believe, served to constrain their utility. A similar critique is advanced by the German-led Beccaria programme[3] for improving the quality of both crime prevention practice and its documentation. In the following two sections I review how both kinds of evaluation and the resultant knowledge are too narrowed-down and oversimplified respectively to inform policy and delivery, and to guide practice. The first section, on *selection* of action, gives greater emphasis to shortcomings of impact evaluation, the second, on *replication and innovation,* to those of process evaluation. These sections in fact correspond reasonably[4] closely to Tilley's (2006, in press) distinction between 'What Works'? and 'What's To Be Done?' although Tilley presents these as alternative approaches rather than the complementary strategic choice and tactical realisation envisaged here.

Selecting interventions – strategic choice

Depending on the range of evaluation results available to answer the basic question of What Works against a given crime problem, the selection of what community safety action to implement can be guided in different ways – by:

- Knowledge of **individual** solutions like 'is CCTV effective?'
- **Comparative** knowledge, like 'is CCTV more cost-effective than street lighting?'
- **Portfolio** knowledge, like 'what is the best mix of street lighting and CCTV to maximize cost-effectiveness, exploit synergy and avoid interference?'
- **Gap** knowledge, like 'we have a good set of quick wins, but what effective long-term solutions are there?'

All these alternatives should be further qualified by reference to context. They can be assembled at any level of detail, but there is a tendency for evaluations of community safety projects to compress the knowledge gleaned into just a few numbers reflecting impact, such as percentage reduction of crime or fear; or some more sophisticated equivalent such as effect size (based on odds ratios). The ultimate expression of this tendency is the Campbell Collaboration, a move to conduct systematic and rigorous reviews of evaluation of what works in specific fields of social research such as crime prevention. It is modelled on a similar programme in medical science.[5] Examples of

[3] www.beccaria.de/Kriminalpraevention/en/Documents/Flyer_en_7.pdf

4 Tilley's 'WTBD' guidance includes ethical issues relating to wider social values, utilities other than numbers of crime events, and crime distributional consequences of different crime reduction strategies. The current chapter places them under strategic choice, though obviously they have to be revisited in practical implementation.

[5] Following the success of the Cochrane Collaboration in reviewing evidence for health care interventions, the Campbell Collaboration was founded in 2000 to produce systematic reviews of social, educational and criminological interventions. The aim of the Campbell Collaboration is to make the best knowledge about "What Works" immediately available electronically (e.g. on the World Wide Web) to all interested persons, including scholars, practitioners, policy makers and the general public. These systematic reviews are subject to rigorous quality control, often draw on statistical techniques such as meta-evaluation (usually compressing evaluation results into uniform effect size measures), cover research throughout the world, are to be regularly updated and revised. The Campbell Collaboration further aims to stimulate higher-quality evaluations to feed the knowledge-gathering process in the future. Farrington and Petrosino (2001) describe

these reviews, on the effectiveness of CCTV (Welsh and Farrington 2002) and of street lighting (Farrington and Welsh 2002). show what *can* be done through this approach. By default they also show what still *needs* to be done to fill the gaps in our ability to reliably inform community safety action.

The systematic review, and the compression of impact results more generally, have undoubted value in simplifying policy and delivery choices. Those choices are enhanced when *cost*-effectiveness information is included (for example the York University synthesis of cost effectiveness information on the burglary reduction projects in the UK Home Office's Crime Reduction Programme (Bowles and Pratipyo 2004) and the Home Office's own use of this kind of information in guiding policy decisions (Home Office 2004). But an essentially *one-dimensional* approach to What Works has significant limitations whether the relevant actions are being planned locally or nationally.

Knowledge Framework for Policy Choice

The most appropriate framework for linking knowledge derived from evaluation findings to policy is one based on **performance.** Performance at a strategic level (whether national or local) can be assessed along a range of dimensions which are content-free. As such they complement the kind of performance indicators which reflect the state of particular policy problems such as Reassurance or Violent Crime. The dimensions are as follows:

- Obviously, selecting interventions that are *effective, cost-effective and whose benefit significantly outweighs cost*
- Being *responsive* and *scalable* to crime/safety problems, which includes:
    - *Prioritisation* of community safety action in terms of severity of *consequences* of crime/safety problems (and perhaps in line with wider policy targets)
    - Accurate *targeting* on needs of victim and wider society – intervening universally or selectively as appropriate; and on causes of crime/safety problem – intervening at appropriate levels from local to international.
    - *Coverage* on the ground, in terms of what *proportion* of a given crime problem the policy aims to tackle. Here, context knowledge is especially important. It may sometimes be most cost-effective to target only the worst-hit areas or the most serious crimes, but there are also benefits from interventions which can protect more targets of crime or influence more offenders, even if less efficiently. Ekblom (1998) illustrates this choice in relation to the evaluation of the Safer Cities Programme.
    - *Scope*, in terms of the range of different crime problems that are tackled in the sphere of responsibility of the policymakers.

---

the general background to Campbell and the aims of the Crime and Justice Group in particular. The general website is http://campbell.gse.upenn.edu and that of the crime & justice group is www.aic.gov.au/campbellcj . It is worth noting in passing that strong disagreements exist over the issue of evaluation design and the 'Sherman Scale' of quality in particular (where best = randomised control trials) – see eg Hough (this volume); but this is not covered here.

- *Adaptability* to changing circumstances (eg technological/social change or criminals' countermoves – Ekblom 1997, 1999, 2005a) and are not locked into fixed conditions.

- Taking action over *appropriate timescales* – short, medium, long term.
- Pursuing policies that are *sustainable* in themselves over the desired timescales and do not jeopardise other community safety priorities through hunger for human/ financial resources.
- Avoiding significant undesirable *side-effects* of action – such as stigmatisation of areas or people, and balancing or creatively optimising *tradeoffs* eg interference with other values and policy areas such as privacy or environmental sustainability, inequity of provision or even displacement of crime onto more vulnerable victims.
- Maximising *legitimacy or acceptability* of preventive actions, within the wider population, within minority subgroups, or even among offenders themselves.
- Ensuring policies are *deliverable*. Although policymakers do not need to get immersed in detail of delivery their decisions must take account of the *likelihood* of policy action successfully delivering appropriate action on the ground, and of that action then successfully producing the desired policy outcome.

If these are the dimensions of policy-performance, then evaluations, and the knowledge bases that organise the results of those evaluations, must reflect them in the features by which the evaluated actions are characterised. Table 1 suggests how this might be done. Column 1 lists the dimensions of policy performance; Column 2 the features of projects and programmes that evaluations should aim to measure and knowledge bases to capture and make available to policymakers.

Table 1. Some dimensions of policy performance, and features of knowledge of community safety actions that can inform appropriate policy choices

Dimensions of policy performance	**Features of projects / programmes that evaluations need to capture** in each case context-sensitivity and deliverability information are also important
Selecting interventions that are *effective, cost-effective and whose benefit significantly outweighs cost*	*Impact, cost-effectiveness, cost-benefit* information. *Range* of likely values – how *certain* is action to deliver desired result in terms of deliverability; impact once properly delivered?
Prioritisation of community safety action in line with values and targets	*Consequences* of crime/safety problems – individual and collective
Accurate *targeting* on needs of victim and wider society, and on *causes* of crime/ safety problem	• The *ecological level* (WHO 2004) such as individual victims, offenders, places or communities at which the intervention is targeted (relates also to Levels 1-3 crimes in UK National Intelligence Model); • Sherman et al's (1997) related concept of

	institutional settings for crime preventive action such as family, peer group or school. • Whether targeting is *primary* (directed to all people, places or objects), *secondary* (to those at heightened risk of offending or being the subject of crime) or *tertiary* (to those by whom/ against or in which crimes have already been committed) (Brantingham and Faust 1976; van Dijk and de Waard 1991).
Coverage on the ground	What *proportion* of a given crime problem can the programme or project tackle (cost-effectively, with acceptable risk of side-effects etc)?
Scope	What is the *range* of different crime problems that are tackled – are the interventions *narrow- or broad-spectrum*? (eg anti- domestic burglary versus tackling all crime motivated by drug-use)
Adaptability	How dependent is the action for successful delivery, impact and acceptability, on certain conditions being maintained? How robust/flexible is the action if circumstances do change within a broad range of possibilities suggested by horizon-scanning? Is there risk of lock-in or can it be halted?
Taking action over *appropriate timescales*	What is the time needed to *plan and implement* the action, time for *action on the ground to have its preventive effect*, time for this *effect to be reliably demonstrable*?
Pursuing policies that are *sustainable* financially and in Human Resource terms, relative to competing priorities	How costly or difficult is the *implementation* of the preventive activity to maintain? (A recent example is the all-out war on street crime in certain UK cities which was successful while it lasted but which was too demanding on resources to maintain.) How long does the *preventive mechanism* itself remain active? (for example does CCTV act by merely (temporarily) frightening off offenders, or (more durably) substantively increasing the risk of arrest and conviction?
Avoiding significant undesirable *side-effects* of action and balancing or creatively optimising *tradeoffs* with	Eg to what extent does project/ programme *stigmatise, widen the net, displace crime, meet energy-efficiency targets and respect*

other policy values	*Human Rights*?
Maximising *legitimacy or acceptability* of preventive actions	What are nature, extent, risks and consequences of possible *legitimacy* issues surrounding programme/ project?

Some of the above features are 'value neutral' – for example, the timescale, the scope and the coverage of particular actions to realise a particular policy could, depending on circumstances, fall one way or the other. So sometimes it may be appropriate to select action that is long in timescale, narrow in geographical coverage, but broad-spectrum in scope of crimes tackled; at other times, and depending what else is in the portfolio, the best actions to select may be at the opposite ends of these scales. But other features tend consistently towards the positive (eg cost-effectiveness) or negative (eg adverse side effects) though these can be tolerated if wider priorities require it.

In terms of measurement, some of the features are inherently quantitative, others could be converted to simple rating scales to aid choice: Still others will remain resolutely qualitative and categorical, but no less important for that. Some of the knowledge derives from impact evaluation, and cost-effectiveness estimation, some from wider information describing the nature of the action and its context, and some from process evaluation. Portfolio-based policy performance especially requires additional knowledge of *tradeoffs, synergies and contraindications* among the features. For example, types of action that are especially cost-effective in high-crime areas may still be undesirable because legitimacy is hard to achieve there, or have a significant risk of causing a riot.

Coverage, scope and cost-effectiveness information were used in the UK Home Office's strategic modelling of the impact of various kinds of crime reduction activity (Home Office 2004a). This approach was used to help set recent crime reduction targets (Home Office 2004b). Such exercises are valuable, and target-setting is now far more rational than when based on the 'hunch' or 'predilection' approaches of previous occasions. But other dimensions were left out of the formal analysis.

Goldblatt and Lewis (1998) did attempt a richer portfolio-type assessment on the basis of the Home Office's comprehensive spending review of 'what works', which set the scene for the 1998-2001 Crime Reduction Programme. But the exercise was not set up to *systematically* assemble information on features like those listed above. In many cases the necessary information was not available in the individual topic review chapters, nor, probably, in the original source evaluations.

Having systematic access to this array of information on community safety interventions would give decision-makers a kind of 'Consumers' Report', to guide their selection of types of action to implement.[6] Absence or inconsistency of this information must surely mean poorer policy decisions, whether these are made nationally or locally – eg by Crime and Disorder Reduction Partnerships, Local Strategic Partnerships or Strategic Tasking and Coordinating Groups acting within the UK National Intelligence Model.[7]

[6] For an example of a limited consumers' type review of situational crime prevention within the Goldblatt and Lewis report just cited see Ekblom (1998).

[7] The latter currently applies to policing but in future is likely to apply to community safety more generally (Home Office 2005).

Knowledge for Delivery

By *delivery*, I mean making community safety action happen routinely on the ground to a sufficient level of quality and appropriateness for crime problem and context, such that those intervention methods shown to work in *principle* (eg through demonstration projects), reliably do so in *practice*. Knowledge to inform deliverability obtained from evaluations would cover the prospects of successful *implementation* in mainstreaming of programmes and the corresponding risk of *implementation failure*. In particular:

- *Capacity building* (infrastructure, human resources and training to be supplied 'off the shelf'); *capacity development* (where that capacity first needs to be brought into existence perhaps through R & D); and *climate* (eg understanding and acceptance of a particular kind of delivery organisation or community safety method on the part of the public, and/or of the practitioner culture).
- The appropriate *institutional settings* to support the action (cf Sherman et al 1997) such as policing, justice, family or schooling; and the degree to which those institutions and organisations are designed to provide that support (for example, see Townley et al (2003) on lack of institutional support for Problem-Oriented Policing).

This knowledge would not only help those planning the details of delivery, but would also feed back to guide policy: whatever the theoretical promise of impact on crime, nobody wants a policy whose delivery cannot be reliably guaranteed. But this sort of information currently does not feature in systematic reviews.[8] It may appear piecemeal in publications such as the Home Office's 'Development and Practice Reports' (for example the report of Gill et al 2003 covering staff selection and training issues in CCTV control rooms) although the format does not necessarily highlight it or ensure its systematic collection, reporting and retrievability.

These failures of evaluators to systematically collect, and accessibly report, the kinds of knowledge described in the last two sections – or failures of those who commission and use evaluations, to *ask* for them – mean that the people responsible for making policy or designing delivery are fed a patchy and thin gruel of knowledge of what works and how to deliver it. Clearly a richer, multi-dimensional diet is needed for nurturing intelligent decision-making and planning. And policymakers and delivery managers at all geographical levels need to be educated, encouraged and expected to partake of this nourishing fare.

Replication and innovation for community safety practice

The focus now moves to practice on the ground – to the design and execution of specific projects targeted on specific local crime/ community safety problems. I have elsewhere (Ekblom 2002a) identified further causes of implementation failure in terms of inadequate knowledge of good practice and a weak conceptual framework to organise it

---

8 Although in medicine there is at least one systematic review on methods of evidence on the effectiveness of the *processes* of transferring knowledge to practitioners (here, the outcome measures of the evaluations reviewed aren't reduced illness but improved performance of medics…which hopefully does lead to reduced illness if the *impact* evidence base is also sound). See www.epoc.uottawa.ca/scope.htm

and impart it to practitioners. The argument applies mainly to process evaluations – with the additional focus on obtaining information on the causal mechanisms by which the intervention worked or was intended to work – and is summarised as follows.

Reviews of community safety projects (eg Bullock and Tilley (2003), and Read and Tilley (2002); Sutton (1996) on the Safer Cities Programme, and Goldstein (2003) on Problem-Oriented Policing) commonly reveal *superficial interventions* with no clear understanding of the causes of the crime problem and a lack of focus on either the fundamental principles of community safety or the detailed causal mechanisms by which the methods are meant to work (Pawson and Tilley 1997). An example too often seen can be paraphrased as 'this project is about working with young people'. Now, this could equally be a good intervention or a poor one; it is certainly a poor description. What *exactly* is the project trying to do – and how exactly does it work? Both questions need answering before practitioners can reliably replicate.

Insufficient focus on causes and causal mechanisms additionally weakens the causal inferences made by impact evaluations and the replicability of their results. Sadly, therefore, we find many *cookbook replications* – which do not seek to copy the underlying mechanisms of a successful intervention, or the intelligent process of going from analysis to intervention to implementation.[9] Instead, they only copy its external form. They also fail to recognise that a method may work well in one social context, but not in others. Crime reduction methods are not like pesticide which can be sprayed uniformly over all the fields and have the same universal effect. A particular mechanism, such as deterrence of offenders by a CCTV system, may need a highly specific set of preconditions to be established among both offenders and crime situation before the desired mechanism is triggered, which then may or may not lead to the desired result.[10]

We also find *limited innovation* (cf Sutton 1996). Creativity too comes from an organised knowledge of principles and an ability to splice them together to suit specific instances, rather than from a random idea generator or a fixed repertoire.

Under all these circumstances, we would do better to arm practitioners with a set of generic *principles* of community safety and knowledge of the *process*, rather than supply them merely with large numbers of fixed solutions which, may not always fit, and may in any case become obsolete. More broadly put, we should help practitioners, when appropriate, to think less like technicians selecting a simple prepackaged remedy from a limited menu, like a service engineer with a broken washing machine; and more like expert consultants, using these principles to customise to context, to innovate, design[11] and reconfigure their diagnoses and solutions as they go.[12] Tilley (2006 in press) makes the case for both kinds of practice being valid in different circumstances centring on the

---

[9] The best-documented example is Tilley's (1993a) study of attempted replications of the successful burglary prevention project in Kirkholt (Forrester et al., 1988,1990).

[10] Tilley's (1993b) ananlysis of 10 possible mechanisms by which CCTV could protect a car park is a classic evaluation in this'Scientific Realist' mode.

[11] Ekblom (2005) argues that community safety practitioners should 'draw on design', meaning not just incorporating in their solutions to crime problems the tangible *products of design* such as secure houses, but applying *design methods* to the entire process of generating community safety action.

[12] Interestingly, Hough, this volume, uses the very similar image of the plumber versus the social engineer.

underlying simplicity or complexity of the crime problem being addressed.[13] Consequently, both kinds of supporting knowledge should be available in appropriate forms, albeit both tested against evidence as far as possible; but the focus in this chapter remains on the neglected, expert end of the scale.

Knowledge requirements for practice – a design specification

To support the kind of expert-practitioner approach just described, the principles of knowledge management suggest that the knowledge gleaned from process and impact evaluations should meet certain requirements of *content, context, structure, terminology and conceptualisation.*

- *Know about crime and safety problems, and Know What Works* knowledge are as essential for guiding practice as it is for policy, of course. But for successfully sharing and replicating good practice lessons and supporting innovation our knowledge base must also contain sufficient *Know How* to describe *process* in a way that promotes the *intelligent reconstruction* of community safety actions by describing every stage of developing and delivering them.
- The knowledge base must extract information on the original *context* of the project, and how that context was thought to contribute to successful analysis, intervention, implementation and impact. One important factor to capture in adapting to different contexts is what I call *Troublesome Tradeoffs* (eg Ekblom 2005b). By these, I mean the tricky balances that must be creatively resolved in designing any community safety activity (such as a surveillance strategy for a shopping centre) or designing a product (such as a crime-resistant car). How do we maximise security for reasonable cost, whilst also respecting convenience, privacy, aesthetics, environmental issues, social exclusion and sales figures? The general principles behind a new replication may be similar to the original project that is being copied. But the pressures, constraints and possibilities for realisation may be very different in new contexts, leading to rather different solutions in practice (ODPM/Home Office 2004).
- The *structure* of the knowledge base must help practitioners to flip nimbly between thinking at several levels and from alternative viewpoints.
    - From an immediate, *implementation* perspective, we have to help practitioners think, and share information about practical, tangible *methods* – like installing CCTV, running particular activities in youth clubs, or fixing gates on the alleyways behind houses. Given the importance of process, we should be able to retrieve good practice *elements* of method derived from each stage of a project. For example, if a burglary scheme implemented a rather lacklustre intervention, it may still have developed an extremely useful and novel method of mobilising the local community – this is an element of good practice which could be used in a range of other circumstances such as in tackling car crime. Recombination of such elements contributes to the capacity for innovation.

[13] Tilley's 'What Works' and 'What's to be done?' correspond closely with 'know what' and 'know how' in this chapter.

    - From an *analytic* perspective we have to try to extract information on higher-level *principles* such as surveillance and on *theories* like social learning theory (theories are the ultimate in compressed knowledge), and very specific causal *mechanisms* – how principles actually combine and play out in detailed configurations in any given context.
- The knowledge base also requires a standard *terminology* (Ekblom 2002a,b; 2004b). Its absence limits what can be described and retrieved in a knowledge base. This is especially a problem with international knowledge bases.
- Underneath the terminology, there has to be a clear *conceptual framework* to support the capture, storage, retrieval, transfer and application of knowledge. This is about supplying people with *precision tools for thought*. The development and widespread use of a strong conceptual framework has several important advantages for the performance of community safety. It:
    - Facilitates communication and collaboration between diverse partners: the police may use one term, social workers a different one.
    - Enhances clarity of planning preventive action, and quality assurance of implementation.
    - Enables integrated, strategic thinking about causes and solutions – some people (and behind them, some occupational cultures) currently speak only a law enforcement language, others the language of civil reduction and community safety. And some people focus exclusively on situations, others just on offenders.
    - Supports the analytic thinking specified above, and plays its part in a 'generative grammar' for creating plausible new ideas for community safety action.
    - Supports education and training. Learning works best when practitioners have a complete mental *schema* (Bloch 2000; Ekblom 2002a) with which they can organise their knowledge, and assess and assimilate new facts whether transmitted from above or from peers.

Existing practice guidance and knowledge frameworks

In contrast, say, to medicine, the practice guidance literature in the community safety field has no regularity of structure or precise and consistent terminology, and cumulation of knowledge is sporadic and inconsistent. Each of the Home Office Development and Practice Reports[14] covering community safety is entirely self-contained and independently-structured; so are the toolkits in the Crime Reduction website – and the 'theory' section of that website can best be described as 'pick 'n' mix'. Earlier Home Office guides use a range of analogies and models, such as getting the grease to the squeak (Hough and Tilley 1998), the chemistry of burglary reduction (Tilley et al 1999), not rocket science (Read and Tilley 2000) and opportunity makes the thief (Felson and Clarke 2004). Although centring on some common concepts, the reports in question have seemed partly to reinvent the terminology and framework with every publication.

[14] www.homeoffice.gov.uk/rds/dprpubs1.html

The framework to capture and play back the process of community safety action that most commonly *does* appear in these and other publications in the English-speaking world is *SARA* (Scanning, Analysis, Response and Assessment). The framework for crime causes and interventions is the *Crime Triangle* (Offender, Place, Target/Victim). Both are well-described and illustrated in Clarke and Eck's guide for crime analysts (Clarke and Eck 2005) and the American COPS publications,[15] a range of practice guides focusing on specific crime problems. But are SARA and the Crime Triangle up to the demanding specifications for a knowledge framework set out above?

SARA and the Crime Triangle are easily-grasped instant introductions to the problem-oriented approach to community safety. But once practitioners have understood the basics, they will rapidly find little depth to guide action further, let alone foster the development of expertise. Nor do these frameworks inspire or support the creativity vital to take community safety to new contexts and keep up with social change and adaptive criminals (Ekblom 1997). SARA's 'Response' confuses several quite distinct activities (described in the next section). There is no consistent organisation of knowledge at more detailed levels. More recent alternatives such as PROCTOR ('PROblem, Cause, Tactic or Treatment, Output and Result' – Read and Tilley 2000) share the same limitations (and in this case, blow three letters of the acronym on just one concept!) The Crime Triangle offers incomplete coverage of the immediate causes of crime, especially under-representing the offender side.

A new framework – more fit for purpose?

The new framework that I have been developing since the mid-nineties has several elements which attempt to build on existing frameworks and overcome their limitations.
It comprises:

- A suite of *definitions* including crime reduction, crime prevention and community safety
- A *map of the main crime reduction process*, the 5Is framework, which assembles know how and systematically captures and shares knowledge. 5Is was developed for the EU Crime Prevention Network (eg Ekblom 2002b)and has been used in a number of What Works conferences there; and also used, for example, by the Swedish National Crime Prevention Council.
- Finally, covering knowledge about crime and safety, and knowledge of what works to prevent it, we have the Conjunction of Criminal Opportunity framework. This maps out the *immediate causes of criminal events and the families of preventive intervention in those causes*.

Definitions

The following definitions are deliberately open-ended and inclusive of the widest range of theories and methods without reference to evidence of effectiveness. The latest versions are maintained at www.designagainstcrime.com/web/crimeframeworks.

[15] www.cops.usdoj.gov/default.asp?Item=248

Crime reduction is simply about decreasing the *frequency* and *seriousness* of criminal events, by whatever (legitimate) means. *Crime prevention* is intervention in the *causes* of criminal and disorderly events to reduce the *risk* of their occurrence and/or the potential *seriousness* of their consequences.

Community safety is a wider *quality of life* issue going beyond individual events. It is a state of existence in which people, individually and collectively, are sufficiently free from a range of real and perceived risks centring on crime and disorder; are sufficiently able to cope with those they nevertheless experience; and where unable to cope unaided, are sufficiently-well protected from the consequences of these risks. In all cases this is achieved to a degree which allows people: to pursue the necessities of their cultural, social and economic life; exercise skills; to enjoy well-being and receipt of adequate services; and to create social capital (ie trust and collective efficacy) and cultural and commercial wealth.

5Is

In 2002 (Ekblom 2002b) I set out a version of the above design specification for a framework for knowledge. In parallel I developed a framework intended to meet that specification: the 5Is. In effect, this centres on the 'know how' of community safety, serving both to capture knowledge of existing good practice and to specify a methodology for doing the practice itself, in a series of tasks that replay the 'Preventive Process' (Ekblom 1988).

- *Intelligence* is about gathering and analysing information on crime problems and their causes, participants and consequences.
- *Intervention* is about action to block, disrupt or weaken those causes and risk factors, in ways which wherever possible are evidence-based and appropriate to the crime problem and the context.
- *Implementation* involves converting the in-principle interventions into practical methods, and putting them into action on the ground.
- *Involvement* covers *mobilising* other agencies, companies and individuals in the community to play their part in implementing the intervention; the more symmetrical *partnership*; and *climate-setting.*
- *Impact,* cost-effectiveness and the dimensions of policy performance and delivery discussed above*. (Process* evaluation can be covered under the relevant tasks – Intelligence to Involvement.)

5Is obviously builds on SARA. But it reorganises the tasks and in particular, it breaks the crude task of Response into three distinct aspects. One could say that SARA supplies the action words – the verbs – whilst 5Is comprises the nouns of the knowledge produced or used by that action.

- Scanning and Analysis for Intelligence
- Response through Intervention, Implementation and Involvement
- Assessment of Impact

As will be seen, the noun structure allows expansion into much more detail.

The 5Is tasks are linear, but not rigidly so: as researchers in Problem-Oriented Policing acknowledge (eg Knutsson 2003; Weisel 2003) doing community safety involves a great deal of iteration, zooming in and out between tactics and strategy, and passing the responsibility to other organisations and individuals to carry out particular tasks or adopt particular roles. It is worth also noting that by posing the question 'what are the necessary organisational and infrastructural conditions to support each task?' there is a ready framework to distil evaluation implications for delivery.

To help organise and communicate the framework, 5Is has three levels of detail.

- The 5Is themselves are the *Message*. This is an easily remembered slogan which communicates the basic concept in everyday language to a wide range of users.
- The next level is the *Map* – a detailed list of standard headings under each of the 5Is. This is suitable for managers and supervisors to be familiar with.
- The final level is the *Methodology*. This is the detailed guidance and knowledge for professional practitioners that appears, or will appear, under each of the headings of the Map.

Conjunction of Criminal Opportunity

Where SARA is usually accompanied by the Crime Triangle, 5Is uses by preference the *Conjunction of Criminal Opportunity* framework (CCO). It appears as Methodology under the *Immediate Causes of Crime* (Map level), which in turn comes under *Intelligence* (Message level). CCO reappears as Methodology under *Intervention principles* (Map level), which comes, unsurprisingly, under *Intervention* (Message level).

CCO incorporates the Crime Triangle, Routine Activities Theory (RAT – Cohen and Felson 1979), Rational Offender theory (Cornish and Clarke 1986), General Theory of Crime (Gottfredson and Hirschi 1990), wider offender-oriented approaches and more. CCO is deliberately inclusive – theory-friendly but not adherent to specific theories. It has the added advantage of extensions into organised crime and terrorism (Ekblom 2003; Roach et al., 2005); it is designed to switch between a **structural** perspective of simply mapping the proximal causes of criminal events to **dynamic** perspectives covering how these causes interact to generate and shape the event, and how higher-level **emergent** factors at various 'ecological levels' beyond events (such as criminal careers, communities, networks or markets) bring the proximal causes together.

Limited guidance material for 5Is and CCO is on the UK Crime Reduction website at www.crimereduction.gov.uk/learningzone/ . An up-to-date list of project descriptions, publications and guidelines applying both frameworks and associated definitions is at www.designagainstcrime.com/web/crimeframeworks

An illustrated example of 5Is and CCO in action together, recording a project aimed at reducing antisocial behaviour fuelled by underage consumption of alcohol, is on the 'Together' website.[16] As that example shows, 5Is deliberately reflects the complex structure of community safety action discussed above, in that it specifies the recording of both methods and underlying principles. Table 2 shows the summary sheet for the

[16] www.together.gov.uk search for 'Eastleigh' or go to the formal project description at http://www.together.gov.uk/cagetfile.asp?rid=892 . A slideshow presentation on the same project is at www.crimereduction.gov.uk/gpps05.htm .

antisocial behaviour project, which also includes one of the other 'elements' of action centring on Involvement. This summary (in the original document) gives hyperlinks to separate sections for each of the 13 intervention methods.

Table 2 5Is Summary sheet of Intervention and Involvement, antisocial behaviour project

	Intervention Method	Intervention Principles	Involvement
1:	Modification of carrier bags to identify the origins of alcohol purchase	Reducing readiness to offend (removing supply of alcohol); deterring and incapacitating crime promoters (shopkeepers), mobilising preventers (parents); empowering preventers (police).	Police; retailers
2:	Targeted High visibility police patrols	Deterrence and discouragement; Reassurance; Removing offenders from crime situation/ dispersing groups of offenders	Police; Community wardens
3:	Antisocial behaviour contracts considered for persistent offenders	General and specific deterrence and discouragement; Removing offender from crime situation; Cracking down on promoters (parents) and converting to preventers	Police; Local councils
4:	Target hardening of a retail store to stop alcohol theft	Perimeter/access security; Target hardening; Environmental design; Conversion of crime promoters to crime preventers	Police; Retailers.
5:	Removing a flowerbed from in front of a row of shops	Environmental design; Restricting resources for crime; Deflecting offenders from crime situation; Reassurance	Police; Retailers; Landowner
6:	Community clean up of litter in local streets	Reassurance; Deterrence; Motivating preventers	Community wardens; General Public
7:	Youth shelter	Removing offenders from crime situation and from alcohol; Reducing readiness to offend by meeting needs legitimately	Police; Local Authority; Crime Reduction (HO grant)
8:	Mobile recreation unit	Removing offender from the crime situation	Police; Local Authority
9:	Arresting/Cautioning of ASB offenders	Removing offenders from the crime situation; Giving offenders resources to avoid offending (education); Deterrence and discouragement; Mobilising preventers (parents)	Police; Parents; Local authority
10:	Drop in centre for youths	Removing offender from the crime situation	Police; Local authority
11:	Healthy living centre for youths	Removing offender from the crime situation; Reducing readiness to offend by meeting offenders' needs	Police; Local authority
12:	A forest location as alternative place for youths to gather	Removing offender from the crime situation; Rule setting; Reducing readiness to offend by meeting offenders' needs	Police; The Tree Conservation Volunteers Group
13:	Disrupting a possible drugs market targeting youths	Removing offender from the crime situation; Resources to avoid offending (drugs education)	Police; CJS

Source: Interview with Hampshire Police Project Team 2004

Complexity

Undoubtedly, the above specifications for the structure and content of knowledge needed to support high standards of policy, delivery and practice make for some complexity. There are, though, many proponents of simplicity. A prominent figure in the UK community safety field once advised me to simplify my ideas in order to get them across. With practitioners, he went on, we would be lucky to have them remember just one or two simple slogans. Is this a valid argument, albeit put rather patronisingly? After all, the basic premise of crime prevention is extremely simple (cut the causes to cut the crime). My own view is that it is wrong: reliance on simplicity alone has plainly neither delivered successful community safety, nor Problem-Oriented

Policing. The answer to this particular aspect of 'Life, the Universe and Everything' is clearly not '42'.

To a large extent the specification for knowledge, and thus for the evaluations needed to feed that knowledge base, themselves embody the case for complexity – yes, community safety is that complex.[17] However, to place things in context, architectural or medical students would surely scoff at complaints that CCO and 5Is are complex relative to the knowledge structures *they* have to assimilate and apply; likewise the knowledge that police have to apply to interrogation or rules of evidence.

Whatever the case, leading proponents of the Problem-Oriented approach such as Knutsson (2003), Eck (2003) and Tilley (2006) now also acknowledge that undertaking this approach is more complex and demanding than originally thought. But – by remaining with SARA and the Crime Triangle they are building on too narrow a base for policy, delivery and practice; equally serious, it is too narrow a base to support the leading edge of *research*. Ashby's Law of Requisite Variety (Ashby 1957), a cybernetics principle that has had wide currency in the organisational world, articulates the problem. To paraphrase: *our mental frameworks must reflect the complexity of the problems they are intended to tackle or understand; it takes complexity to deal with complexity*. In more everyday language: given the complexity of community safety practice, it is futile dumbing down community safety knowledge into slogans and rapid-read case studies to aid communication to practitioners, and one-dimensional guidance for the choices of policymakers, if these cannot inspire actions that are sophisticated enough to do good and avoid harm. And on the receiving end of those communications, it is equally futile if practitioners are not endowed with the expertise to understand, critique and assimilate that knowledge so they can operate at that same level of sophistication.

Any complexity we introduce must however be *appropriate*, and *deliberate*. An *unnecessary* layer of complexity masquerading as simplicity is added by criminologists' failure to integrate theory (Ekblom 2002a). In the criminological literature fragmentary part-models of causation abound. Each individual model (eg Routine Activities Theory (Cohen and Felson 1979)) is indeed simple, and often excellent in itself. But in both research literature and practical guidance they are all dumped in a heap,[18] leaving each reader to figure out afresh how to combine them and cope with gaps, overlaps, competing explanations and possible emergent causes linking individual criminal behaviour to area crime patterns. How, for example, does RAT relate to Rational Offender (Cornish and Clarke 1986)? Where does self-control (Gottfredson and Hirschi 1990) fit? How do criminal career, network or market processes emerge from the interaction of elementary causes? The CCO and Wikström's (2004) Cross-Level Situational Action Theory are among the few systematic attempts at integration.

Another complexity-related issue is the appropriate level of *detail* of practice to capture. Such detail can be extensive as the full 5Is case study shows – but to a significant extent

---

[17] One is reminded of the story of the king who said, 'Yes, I'm paranoid – but am I paranoid enough?'

[18] This calls to mind the TV series 'Scrapheap Challenge' www.channel4.com/science/microsites/S/scrapheap/ in which teams compete to assemble functional objects such as mobile cranes from junkyard materials. However, as Nick Tilley (in conversation) pointed out, the teams include engineers who combine both strong professional discipline and practical nous – so may be better placed than many current crime preventers.

this is necessary to harvest the rich *tacit* knowledge of experienced practitioners (Tilley 2006). The structured headings and concepts of 5Is facilitate extraction of such knowledge in an orderly way to make it more explicitly transferable. Deliberately capturing tacit knowledge also exposes it to quality assurance – as Scott (2001) notes, a tradition of purely 'oral transmission' of knowledge from peer-to-peer imparts limited and perhaps inaccurate information, and constantly draws practitioners back into their own occupational culture. Tilley (2006) also argues however that there is an *inappropriate* degree of detail to be rigidly adhered to in the 'programme fetishism' that characterised various recent police and correctional initiatives and was seen as diminishing discretion. Ekblom (2002a) makes a similar point against copying with excessive fidelity. By its focus on process and its twin perspectives of principles and methods 5Is is intended to support the 'practitioner as consultant' rather than 'as technician', with an appropriate blend of discretion and detail.

Conclusion - philosophy

Making complexity work for policy, delivery and practice of crime prevention and community safety requires a well-structured knowledge base populated with good-quality, detailed evaluations reflecting a sophisticated conceptual framework. But these necessary, but insufficient conditions must be accompanied by a completely-refurbished *delivery system* of supportive organisations and working culture; career structure of practitioners (currently too limited) and policymakers (currently too generalist and comprising short-lived stints in community safety); and training in knowledge, skills and techniques.[19] As I have argued before (Ekblom 2002a,b) nobody expects or desires the training of medics or architects to be built on a few slogans or elementary diagrams. (I certainly wouldn't want to be treated by the former, in a hospital designed by the latter, based in both cases on the work of academic researchers whose models are equally limited or fragmented!) Little wonder, then, that the Problem-Oriented approach is now seen by its proponents as hard to make happen, and likely to take a long time (Knutsson 2003) to bed in.

The philosophy behind 5Is, CCO and the whole approach advocated here is that a high level of *investment* in concepts, capture of knowledge through evaluations, and sharing of knowledge and skills through training, guidance and other infrastructure is necessary for a high *yield* in terms of successful *performance* in crime reduction and community safety.

To make this happen clearly requires a change of attitude towards complexity. Fear prevails in policymaking and delivery circles that practitioners can't be prised from their comfort zones of SARA and Crime Triangle to accept something more fit for purpose, if initially more challenging. But things are finally beginning to move in this direction in both Problem-Oriented Policing and wider community safety, as the importance of knowledge and the existence of complexity is recognised throughout the English-speaking world and in continental Europe. But we cannot proceed far without the leading academic proponents and implementers of crime reduction, community safety

[19] Knutsson (2003) and his contributors make a still wider set of suggestions for making Problem-Oriented Policing happen.

and Problem-Oriented Policing programmes grasping the nettle of improving the frameworks for capturing and transferring knowledge, and the research and evaluation that feeds it.[20]

References

Ashby, W. R. (1957). *An introduction to cybernetics.* London: Chapman & Hall Ltd. Retrieved May 2 2005 from http://pcp.vub.ac.be/books/IntroCyb.pdf

Bloch, M (2000). 'A Well-Disposed Social Anthropologist's Problems with Memes.' In: R. Aunger (ed.) *Darwinizing Culture. The Status of Memetics as a Science.* Oxford: Oxford University Press.

Bowles, R and Pradiptyo, R (2004). *Reducing Burglary Initiative: an analysis of costs, benefits and cost effectiveness*. Home Office Online Report 43/04. www.homeoffice.gov.uk/rds/pdfs04/rdsolr4304.pdf

Brantingham P J and Faust, F (1976). "A Conceptual Model of Crime Prevention." *Crime and Delinquency*, 22:130-146.

Bullock, K and Tilley, N (2003). 'The Role of Research and Analysis: Lessons from the Crime Reduction Program.' in J Knutsson (Ed.) *Mainstreaming Problem-Oriented Policing.* Crime Prevention Studies 15. Monsey, New York: Criminal Justice Press.

Clarke, R and Eck, J (2005). *Crime Analysis for Problem Solvers in 60 Small Steps.* Center for Problem-Oriented Policing. *www.popcenter.org/Library/RecommendedReadings/60Steps.pdf*

Cohen, L. and M. Felson (1979). 'Social Change and Crime Rate Changes: A Routine Activities Approach.' *American Sociological Review* 44:588-608.

Cornish, D and Clarke, R (1986). (Eds.), *The reasoning criminal: rational choice perspectives on offending.* New York: Springer-Verlag.

van Dijk J. and J. de Waard (1991). "A Two-Dimensional Typology of Crime Prevention Projects: with a bibliography". *Criminal Justice Abstracts* 23:483-503.

Eck, J (2003). 'Police Problems: The Complexity of Problem Theory, Research and Evaluation.' in J Knutsson (Ed.) *Mainstreaming Problem-Oriented Policing.* Crime Prevention Studies 15. Monsey, New York: Criminal Justice Press.

Ekblom, P (1988) *Getting the Best out of Crime Analysis*. Home Office Crime Prevention Unit Paper 10. London: Home Office.

Ekblom, P (1997) 'Gearing up against Crime: a Dynamic Framework to Help Designers Keep up with the Adaptive Criminal in a Changing World', *International Journal of Risk, Security and Crime Prevention*, 2/4: 249-265.

Ekblom, P (1998) 'Situational Crime Prevention' in Goldblatt, P and Lewis, C (eds.) (1998). Reducing Offending: An Assessment of Research Evidence on Ways of Dealing with Offending Behaviour. Home Office Research Study No. 187. London: Home Office.

Ekblom, P (1999) 'Can we Make Crime Prevention Adaptive by Learning from other Evolutionary Struggles?', *Studies on Crime and Crime Prevention,* 8/1: 27-51.

[20] For further discussion of the drive to oversimplify and what lies behind it see Ekblom (2006).

Ekblom, P (2002a) 'From the Source to the Mainstream is Uphill: The Challenge of Transferring Knowledge of Crime Prevention Through Replication, Innovation and Anticipation.' In: N. Tilley (ed.) *Analysis for Crime Prevention,* Crime Prevention Studies 13: 131-203. Monsey, N.Y.: Criminal Justice Press/ Devon, UK: Willan Publishing.

Ekblom, P (2002b) 'Towards a European Knowledge Base' and 'The Five I's: Experimental Framework for a Knowledge Base for Crime Prevention Projects' in *European Crime Prevention Conference 2002* vol 1: 62-97. Copenhagen: Danish Crime Prevention Council. www.crimprev.dk/eucpn/docs/EUCPN-AalborgReport200210.pdf

Ekblom, P (2003) 'Organised Crime and the Conjunction of Criminal Opportunity Framework', in A. Edwards and P. Gill (eds.) *Transnational Organised Crime: Perspectives on global security.* London: Routledge, pp. 241 - 263.

Ekblom, P (2004b) 'Le Cadre des 5 I' dans Bruston, P et Haroune, A (éds.) *Réseau européen de prévention de la criminalité: (REPC) Description et échange de bonnes pratiques.* Paris: Délégation Interministérielle à la Ville..Also in English.

Ekblom, P (2005a) 'How to Police the Future: Scanning for Scientific and Technological Innovations which Generate Potential Threats and Opportunities in Crime, Policing and Crime Reduction', in M. Smith and N. Tilley (eds.), *Crime Science: New Approaches to Preventing and Detecting Crime*. Cullompton: Willan.

Ekblom, P (2005b) 'Designing Products against Crime' in N. Tilley (ed.), *Handbook of Crime Prevention'.* Cullompton: Willan.

Ekblom, P (2006 in press). 'Good practice? Invest in a framework!' *Network News* Spring. Chester: National Community Safety Network.

Ekblom, P and Pease, K (1995). 'Evaluating Crime Prevention', in M Tonry and D Farrington, Eds, *Building a Safer Society: Strategic Approaches to Crime Prevention, Crime and Justice* 19:585-662. Chicago: University of Chicago Press.

Farrington, D. and A. Petrosino (2001). 'Systematic Reviews in Criminology and the Campbell Collaboration Crime and Justice Group.' *Annals of the American Academy of Political and Social Science* 578:35-49.

Farrington, D and Welsh, B (2002). *Effects of Improved Street Lighting on Crime: A Systematic Review.* Home Office Research Study 251. London: Home Office.

Felson, M and Clarke, R (2004). *Opportunity Makes the Thief: Practical theory for crime prevention.* Police Research Series Paper 98. London: Home Office.

Forrester, D, Chatterton, M and. Pease, K (1988). *The Kirkholt Burglary Prevention Project*, Rochdale, Crime Prevention Unit Paper 13, London, Home Office.

Forrester, D, Frenz, S, O'Connell, M and Pease, K (1990). *The Kirkholt Burglary Prevention Project*, *Phase 11*, Crime Prevention Unit Paper 23, London: Home Office.

Gill, M, Smith, P, Spriggs, A, Argomaniz, A, Allen, J, Follett, M, Jessiman, P, Kara, D, Little, R and Swain, D (2003) *National Evaluation of CCTV: Early Findings on Scheme Implementation – Effective Practice Guide*. Development and Practice Report 7. London: Home Office. www.homeoffice.gov.uk/rds/pdfs2/dpr7.pdf

Goldblatt, P and Lewis, C (eds.) (1998). Reducing Offending: An Assessment of Research Evidence on Ways of Dealing with Offending Behaviour. Home Office Research Study 187. London: Home Office.

Goldstein, H (2003). 'On Further Developing Problem-Oriented Policing: The Most Critical Need, the Major Impediments, and a Proposal.' in J Knutsson (Ed.) *Mainstreaming Problem-Oriented Policing.* Crime Prevention Studies 15. Monsey, New York: Criminal Justice Press.

Gottfredson, D and Hirschi, T (1990). *A general theory of crime*. Stanford, CA: Stanford University Press.

Home Office (2004a). *Modelling Crime Reduction for the Home Office's Strategic Plan* Home Office Online Report 38/04 www.homeoffice.gov.uk/rds/pdfs04/rdsolr3804.pdf

Home Office (2004b). *The Home Office Strategic Plan 2004-08*. www.homeoffice.gov.uk/documents/strategicplan.pdf

Home Office (2005). Review of the Partnership Provisions of the Crime and Disorder Act 1998 – Report of Findings. www.crimereduction.gov.uk/partnerships60.doc

Homel, P, Nutley, S, Webb, B and Tilley, N (2004). *Investing to Deliver: Reviewing the Implementation of the UK Crime Reduction Programme.* Home Office Research Study 281. London: Home Office.

Hough, M and Tilley, N. (1998). *Getting the Grease to the Squeak: Research Lessons for Crime Prevention*. Crime Detection and Prevention Series, Paper 85. London: Home Office.

Knutsson, J (2003). 'Introduction' in J Knutsson (Ed.) *Mainstreaming Problem-Oriented Policing.* Crime Prevention Studies, Volume 15 Edited by Johannes Monsey, New York: Criminal Justice Press.

Nutley S, Walter, I and Davies, H (2003) From knowing to doing: a framework for understanding the evidence-into-practice agenda, *Evaluation*, 9(2): 125-148.

Office of the Deputy Prime Minister/Home Office (2004) 'Reconciling evidence of what works, knowledge of crime reduction and community safety principles, and values.' Annex 2 of *Safer Places: The planning system and crime prevention.* London: ODPM.

Pawson, R. and N. Tilley (1997). *Realistic Evaluation.* London: Sage.

Read, T and Tilley, N (2002) *Not Rocket Science? Problem-solving and crime reduction.* Crime Reduction Research Series Paper 6. London: Home Office.

Roach, J, Ekblom, P and Flynn, R (2005) 'The Conjunction of Terrorist Opportunity: A Framework for Diagnosing and Preventing Acts of Terrorism.' *Security Journal* 18 (3):7-25.

Scott, M (2001). *Problem-Oriented Policing: Reflections on the First 20 Years.* Washington DC: US Department of Justice Community Oriented Policing Services.

Scott, M (2003). 'Getting Police to take Problem-Oriented Policing Seriously.'in J Knutsson (Ed.) *Mainstreaming Problem-Oriented Policing.* Crime Prevention Studies 15. Monsey, New York: Criminal Justice Press.

Sherman, L, Gottfredson, D, Mackenzie, D, Eck, J, Reuter, P and Bushway, S (1997). *Preventing Crime: What Works, What Doesn't and What's Promising. A Report to the United States Congress.* US Department of Justice.

Sutton, M (1996). *Implementing Crime Prevention Schemes in a Multi-Agency Setting: Aspects of Process in the Safer Cities Programme.* Home Office Research Study 160. London: Home Office.

Tilley, N (1993a). *After Kirkholt: Theory, Methods and Results of Replication Evaluations.* Crime Prevention Unit Paper 47. London: Home Office.

Tilley, N (1993b). *Understanding Car Parks, Crime and CCTV: Evaluation Lessons from Safer Cities*. Crime Prevention Unit Paper 42. London: Home Office.

Tilley, N (2006). Knowing and doing: Guidance and good practice in crime prevention. In Knutsson, J. and Clarke, RVG. (eds.) *Putting Theory to Work: Implementing situational prevention and problem-oriented policing*. Crime Prevention Studies. 20. Monsey: Criminal Justice Press.

Tilley, N, Pease, K, Hough, M and Brown, R (1999) *Burglary prevention: Early lessons from the Crime Reduction Programme.* Crime Reduction Research Series Paper 1. London:Home Office. www.homeoffice.gov.uk/rds/prgpdfs/crrburg1.pdf

Townley, M, Johnson, S and Pease, K (2003). 'Problem Orientation, Problem Solving and Organizational Change.' in J Knutsson (Ed.) *Mainstreaming Problem-Oriented Policing.* Crime Prevention Studies 15. Monsey, New York: Criminal Justice Press.

Weisel, D L (2003). 'The Sequence of Analysis in Solving Problems.' in J Knutsson (Ed.) *Mainstreaming Problem-Oriented Policing.* Crime Prevention Studies 15. Monsey, New York: Criminal Justice Press.Welsh, B and Farrington, D (2002). *Crime Prevention Effects of Closed Circuit Television: A Systematic Review.* Home Office Research Study 252. London: Home Office.

Wikström, P-O (2004). Crime as alternative: towards a cross-level situational action theory of crime causation. In J. McCord (Ed.), *Beyond empiricism: institutions and intentions in the study of crime.* New Brunswick, N.J.: Transaction.

World Health Organisation (2004). Handbook for the Documentation of Interpersonal Violence Prevention Programmes. Geneva: WHO. www.who.int/violence_injury_prevention/publications/violence/handbook/en