THE ROLE OF RESEARCH AND ANALYSIS: LESSONS FROM THE CRIME REDUCTION PROGRAMME

by

Karen Bullock Research Development and Statistics Directorate, U.K. Home Office

and

Nick Tilley Jill Dando Institute of Crime Science University College, London

Abstract: The British Crime Reduction Programme ran from 1999 to 2002. One of its streams, the Targeted Policing Initiative, was specifically concerned with fostering problem-oriented policing. Fifty-nine projects were funded at a cost of some £30 million, over two rounds. This paper outlines the ways in which projects were agreed and reviews the analyses contained in the bids for funding. As with previous British and American accounts of analysis in problem-oriented policing, the extent and quality of the work undertaken was found to be rather limited. Several possible implications of this pattern of findings are outlined and discussed. First, despite the difficulties uncovered, it does not follow that problem-oriented policing is fundamentally flawed and should be abandoned. Second, problem-oriented policing may require substantial increases in agencies' capacities for the required forms of analysis. Third, the Crime Reduction Programme may have provided inadequate and inappropriate support for problem-oriented policing, and thus comprises a flawed test of police analytic potential. Fourth, differing types of problem addressed by a problem-focused police agency may require varying types of analytic skill, not all of which could realistically be expected within a police agency.

Introduction

This paper focuses on the British police service's capacity for problem specification and analysis in the context of a national crime reduction program, one stream of which was intended in particular to encourage and enable problem-oriented policing. The paper provides an overview of relevant bids for funding prepared under the auspices of the program, and looks in more detail at what was considered the best-evidenced bid. The findings are set in the context of British and American reviews of problem-oriented policing projects and of the implementation of problem-oriented policing more generally. The conclusions are not encouraging. The bids continued to show rather limited analysis in attempting to deal with the substantial and recurrent problems that were targeted. Some potential implications are outlined and discussed.

THE CRIME REDUCTION PROGRAMME

The British Government's Crime Reduction Programme was a three-year initiative that ran between 1999 and 2002. The program spent around £400 million over this period (including over £150 million on closed-circuit television [CCTV]) on crime reduction projects and their evaluation.

The decision to fund the program was informed by a review of existing research (Goldblatt and Lewis, 1998), which identified crime reduction lessons learned to date and knowledge gaps that the program might usefully fill. The Crime Reduction Programme aimed to improve the evidence base about:

- what works in reducing crime;
- rolling out and mainstreaming crime reduction projects; and
- the cost-effectiveness of crime reduction projects.

To this end a variety of funding streams were established, within each of which a series of projects ran. Table 1 shows a breakdown of the main funding streams, allocated funding and the areas that the stream covered.

In addition, just under £20 million was spent in a variety of other areas, including partnership development, vehicle crime awareness-raising, a series of web-based crime reduction tool kits, and grants to Rape Crisis and the Suzy Lamplugh Trust. The rest of the £400 million in funding was spent on research and development.

Table 1: Streams of the Crime Reduction Programme

Initiatives	Projects	Total Allocated	Use of Funding
CCTV	683	£169,000,000	For funding schemes nationally.
Targeted Policing	59	£30,000,000	For helping the police to develop and implement a problem-oriented approach.
Reducing Domestic Burglary	246	£24,000,000	For targeting neighborhoods in England and Wales with high burglary rates.
Drug Arrest Referrals	1	£20,000,000	For the development of face-to-face arrest referral schemes that aim to impact upon drug-related offending in England and Wales.
Treatment of Offenders	1	£14,362,000	For a range of initiatives to develop effective practice in working with offenders.
Effective School Management	38	£10,330,000	To integrate approaches to improving schools' management of pupils' behavior and reducing truancy and exclusion.
Violence Against Women	58	£9,655,000	To fund projects on domestic violence, rape and sexual assault.
Youth Inclusion	70	£8,620,000	For Youth Inclusion schemes.

continued

Table 1 (continued)

Initiatives	Projects	Total Allocated	Use of Funding				
Locks For Pensioners	1	£8,000,000	For improvements to home security for pensioners living in low income households in neighborhoods suffering high domestic burglary rates.				
Neighbourhood Wardens	85	£6,000,000	To develop a strategy for neighborhood renewal.				
Vehicle Crime	13	£5,218,000	For improvements to vehicle licensing and registration systems.				
On Track	26	£4,390,000	To identify and assist children and families at risk of getting involved in crime.				
Sentencing	3	£3,900,000	To develop the evidence base for sentencing and enforcement practices.				
Summer Schemes	147	£3,600,000	For diversion schemes during school holidays in low income areas.				
Design Against Crime	4	£1,570,000	To encourage crime-resistance in the planning and design of goods services and buildings.				
Distraction Burglary Projects	3	£1,010,000	For projects aimed at reducing distraction burglary amongst the elderly.				
Distraction Burglary Taskforce	1	£1,000,000	For staffing of dedicated policy team to reduce distraction burglary.				
Tackling Prostitution	11	£871,000	For local agencies working within a multi-agency context to implement local strategies for reducing prostitution-related crime and disorder.				

THE TARGETED POLICING INITIATIVE AND PROBLEM-ORIENTED POLICING

The Targeted Policing Initiative was one of the larger funding streams within the Crime Reduction Programme. Thirty million pounds was allocated to 59 projects. These aimed to reduce a variety of crimes not specifically addressed in other funding streams, using a problem-solving and problem-oriented methodology, drawing on the tenets first set out by Herman Goldstein (Goldstein, 1979, 1990). The intention was to build on the problem-oriented and problem-solving policing styles currently being espoused by many British police forces (Read and Tilley, 2000; Her Majesty's Inspectorate of Constabulary [HMIC], 2000).

The first experiments in problem-oriented policing (POP) in Britain occurred in the Metropolitan Police in the mid-1980s. Sporadic efforts took place in the following years to introduce it in various places, but it failed fully to take root anywhere. A demonstration project in Leicestershire in the mid-1990s was, however, associated with renewed interest (Leigh et al., 1996, 1998). Since that time there have been growing numbers of police services committed to operating along problem-oriented principles. Problem-oriented policing has also been officially advocated in Britain as an effective and efficient way of reducing crime (HMIC, 1998, 2000). At the time of writing few, if any, British forces would repudiate it as a form of policing to which they aspire.

Despite a relatively long history of efforts to introduce problemoriented policing in the U.K. (and some successes in specific initiatives), a range of implementation problems have been consistently encountered (Leigh et al., 1996, 1998; Read and Tilley, 2000; Irving and Dixon, forthcoming). A recent national overview found that though there was almost universal support for problem solving in the police force, high quality problem solving was still exceptional (Read and Tilley, 2000). Common problems have included:

- weaknesses in data analysis, limited data sharing and shortages of analysts;
- inadequate time set aside for problem solving;
- a focus only on local low level problems;
- crudely operated performance indicators;
- inattention to and weakness of evaluation; and
- inadequate partnership involvement.

Through the special funding being made available, the Targeted Policing Initiative was designed to provide the incentives and wherewithal to show what could be achieved by adopting a systematic problem-oriented approach in relation to substantial issues.

Applying for Funding under the Targeted Policing Initiative

Applying for funding from the Targeted Policing Initiative posed a test for the police and their partners. In order to receive funding, bidders were expected to show that they were able to apply problemsolving principles. It was hoped that the resources available would encourage, enable and motivate police forces to spend time identifying and analyzing significant problems and developing responses to them based on the analysis. In addition, funding was partly dependent on partnership involvement in the proposed scheme.

Police forces, in conjunction with local crime and disorder reduction partnerships (CDRPs), were invited to submit proposals for funds through two rounds of competitive bidding. They had roughly a month to prepare their initial bids, though there was scope for later elaboration.

Round One began in 1999. Police forces and their partners completed a basic application form. This asked the project:

- to provide a description of the problem that they sought money to tackle;
- to indicate how the problem related to the findings from local crime and disorder audits and strategies;
- to show how the problem related to the local policing plan;
- to spell out how the problem would be tackled, specifying in particular whether the project would make use of:
 - structured crime /incident data,
 - new structures/arrangements, and
 - innovative tactics;
- to show what crime reduction targets could be achieved;
- to note related initiatives;
- to list other factors affecting the area; and
- to indicate what resources would be required.

A group of Home Office researchers and policy officials reviewed proposals and made recommendations to ministers about which projects to fund.

Ten projects received funding in the first instance, though an eleventh was supported later following extensive revisions to the proposal. Researchers, including external academic consultants, paid a one to two day visit to the personnel involved in each of the projects funded, to discuss the proposal and view the site where the project was to be implemented. The team of researchers then prepared a report on the proposals with recommendations for revisions, which normally included calls for clarification and explanation for the proposed action. The project staff then revised their original proposals and it was these revised proposals which were put to ministers to obtain funding. In most instances the changes made were minor, though in a couple of cases they were substantial, including the one case where the funding decision was carried forward to the following year.

The second round of competitive bidding for funded projects began in 2000. Of 170 proposals that were received, 27 were recommended for funding. There were differences in the way that proposals were selected between Round One and Round Two. In Round Two, projects were asked to submit an "expression of interest" rather than fully developed proposals. Projects filled in a form including the following:

- an outline of the size and the nature of the problem;
- a description of why the problem was worth tackling;
- an explanation of why the problem was amenable to a problem-oriented approach;
- objectives/targets for dealing with the problem;
- possible interventions to tackle the problem;
- an outline of funding required;
- details of planned or ongoing initiatives;
- a timetable.

After a preliminary assessment by Crime Reduction Team staff in Regional Government Offices, Home Office researchers and officials scored the expressions of interest. The following factors were considered:

- innovation: i.e., were novel interventions or adaptations of established interventions to a different type of problem proposed? And was anything new added compared to projects funded under Round One?;
- potential applicability of findings to other areas and forces;

- sustainability of the proposed solution;
- value for money (in terms of the seriousness of the target crime and the likely impact on that crime, and the lessons that might be learnt from the project);
- suitability for evaluation; and
- whether the project was eligible for funding under a different Crime Reduction Programme stream.

The top-scoring 51 expressions of interest were discussed by an assessment panel which consisted of Home Office researchers and policy teams, staff from Her Majesty's Inspectorate of Constabulary, and a representative from the Association of Chief Police Officers. The Local Government Association was invited, but was unable to take part. In addition to the criteria set out above, the panel aimed to select at least one project dealing with each of following:

- property crime
- vehicle crime
- drug related crime
- violent and/or racially motivated crime
- and fear of crime and anti-social behaviour.

As a secondary consideration, if possible it was hoped also to achieve a geographical spread of funded projects across England and Wales.

Home Office staff and external academics again made a series of visits to the 27 projects recommended for funding, following these sifting processes. The aim of these visits was to work through the proposals with those making them to ensure that the projects were targeted and that the police and partners had the support and capacity to implement them properly. The visits were rather more proactive than those that had been conducted in Round One. Evaluation teams looking at first round projects were already identifying problems in project implementation. The idea of the Round Two visits was to provide supplementary advice about the proposal, especially in relation to problem analysis and targeting the interventions, in order that future implementation difficulties were anticipated and minimized. The proposals were then re-drafted and submitted for ministerial approval. All in all, this process took about six months.

It should by now be clear that a number of criteria were used in determining whether to fund the proposed initiatives. These reflected the dual — research and service delivery — purpose of the Crime Reduction Programme. The projects were expected to be consistent with

past research (hence research-aware), to be innovative (hence capable of yielding fresh findings), and to be focused on substantial problems (hence making a significant impact on an important problem). They were also expected to address a given range of issues and to provide funds across the country. The criteria for selection were thus only partially concerned with the quality of the initial problem-analysis.

Table 2: Targeted Policing Projects Not Selected by Competitive Bidding

Project	Initiative	Reason for Funding			
Rural crime	Tackling cross-border crime and repeat victimization in three rural forces.	Fear of crime following the shooting of a burglar in Norfolk.			
Knowsley Basic Command Unit	Suspension of "ordinary" performance indicators.	To assess the impact of problem-oriented policing.			
(BCU) project	Academic and technical support to highlight and tackle local trends in crime.				
Manchester gun project	Problem-solving project aimed at tackling serious gang-related violence in South Manchester.	Interest from Manchester police following successful project in Boston, USA.			
National problem-solving training	Dedicated problem-solving team to develop and deliver training to officers at middlemanagement level on deploying a problem-solving approach. Research and maintenance of	To disseminate good practice. To provide support for forces seeking to implement POP.			
	a good practice database.				
The Pathfinder Project	Application of enhanced DNA techniques and other evidence gathering to volume crime.	To investigate the potential benefits from extending the collection and analysis of DNA trace evidence.			

A number of other projects supported by the Targeted Policing Initiative did not have to compete for funding in the same way. For example, police forces or related agencies could actually apply for funding at any time, though few did so outside the two rounds of competitive bidding described so far. Moreover, some work was funded under the Targeted Policing Initiative that did not originate from local areas. A selection of projects that were supported financially outside the two rounds of competitive bidding, is shown in Table 2.

The Evaluation of the Targeted Policing Initiative

In keeping with the aims of improving understanding of what works and what is cost effective in reducing crime, 10% of the Targeted Policing Initiative budget was originally allocated for evaluation. All of the Round One projects were evaluated by teams of external academics and consultants, who were selected by competitive tender in late 1999.

It had originally been intended that all the funded projects would be subject to independent evaluation. There were changes, however, in the amount of money available for the evaluation of Round Two projects. At the end of 2000 it was decided that a higher proportion of the money should be spent on implementing projects and correspondingly less on evaluation. Thus provision for independent evaluation was made for only nine of the 27 Round Two projects. Home Office researchers evaluated a number of the projects and the rest went out for competitive tender, as with the evaluation of Round One projects. The decision to evaluate a project or not was based on answers to the following questions:

- Did political imperatives suggest that evaluation was unavoidable?
- Was the initiative targeting a key knowledge gap?
- Was it a good quality proposal, with
 - decent problem analysis
 - a proposed solution that was linked to problem analysis, and
 - a realistic planned timetable and resource use?
- Was implementation failure likely?
- Was evaluation failure likely because:
 - insufficient data were available or collectable, and/or
 - other initiatives were likely to interfere with outcomes in intervention area?

Though initially there was some disappointment that funding was insufficient for evaluation of all 27 funded Round Two projects, in the event it was felt that provision to evaluate all that might yield useful findings had been made.

Data Analysis in Round One and Round Two of Competitive Bidding for Funding

The Experience of Round One

Ten projects were funded initially under Round One. These ten proposals were examined for the data sources used, and the extent and forms of initial analysis undertaken. As successful proposals, the 10 were amongst the better ones that were received in the first round. Table 3 shows all of the data sources used in the successful Round One proposals.

The table shows the very limited use made of differing data sources to develop the interventions for Round One proposals. Of these ten successful proposals, two included no data or analysis of any sort. Of the eight that did contain data, three of them did not include any information on recorded crime or disorder. Of the five that contained crime or disorder data, four made use of recorded crime data and two of incident data.

Whilst the table demonstrates the limited sources of data presented in the proposals, it does not show that even where data were available, there were often very limited analyses of them. For example, only one of the proposals managed to identify patterns of repeat victimization using crime data. This was in relation to crime against businesses. Most of the recorded crime or incident data identified nothing more than the total number of recorded crimes of a particular type. Four of the five that included crime or incident data identified changes in numbers of recorded incidents over more than one year. Two gave the specified crime types as a percentage of all crime.

The story is similar for the few proposals that used police data sources other than recorded crime. The one proposal that made use of arrest data merely presented the total number of arrests for the crime type of interest. Similarly, in the one proposal that used information on detections, only the total number of detections for the relevant crime type was included. There was not even, for example, a calculation of the number of detections or arrests as a proportion of the total number of recorded crimes of that type.

Table 3: Data and Analysis Included in Successful Round One Proposals

Problem/proposed project focus	Recorded crime data	Incident data	Fear of crime survey	Repeat victimi- sation	Arrest data	Detection rates	BCS	Audit	Complaints	Demo- graphics
Reduction in								ļ		
market for stolen goods (2 projects)	1									
Fear of crime in rural areas			V							
Crack Cocaine dealing			√	7	٧			V		
Vehicle crime	√					V	V			
Alcohol-related crime	V								·	V
Car crime	√	√					V			_√
Race crime in four boroughs										
(a)			V					√		√
(b)										
(c)			√							V
(d)			V							7
Disorder		√							٧	
Disorder in children's homes										

The use made of the non-police data sets was even more limited. One proposal referred to complaints to the local authority as a measure of a disorder problem, but did not say how many there were, just that there were a lot of them. Three referred to fear of crime surveys, but merely to state that there were "high" levels of fear of crime. None had survey data that corresponded exactly to the area where the project was to be based. Three provided some form of demographic data, but not one used the information to work out rates.

The analyses included in the successful proposals for Round One funding, which were on the whole the better ones, were, thus, very limited.

The Experience of Round Two

Ninety-seven Round Two bids were looked at systematically by an external consultant (see Bullock et al., 2002). The proposals were scored on various dimensions including, among others, numbers of sources of evidence used, quality of analysis, and relevance of analysis to targeting of interventions. No evidence was presented in 13% of bids, and only police data in a further 55%. In 31% of the bids there was no analysis of the data to define the nature of the problem, and in a further 46% the analysis was deemed only very basic. In only 2% of the bids were the interventions considered well-targeted in the light of the analysis. Thus, across the board the Round Two bids were found to have made relatively little use of data, to have included only limited analyses, and to have proposed interventions that were rarely well-targeted in the light of analysis.

Twenty of the unsuccessful proposals received for Round Two funding were also randomly selected and reviewed individually. In addition, 10 of 27 successful proposals were also selected randomly and examined for data sources used in them.

Table 4 shows the crime data used in the 20 unsuccessful proposals that were selected.

Of these 20 unsuccessful proposals, 13 contained crime data (12 recorded crime data and one incident data). As in Round One, most of the proposals did little more than present the total number of a specific crime type. Eight of the 12 that included recorded crime data showed the changes in specific categories over time. Six proposals looked at counts of recorded crimes in comparison to counts elsewhere. Five used percentages — normally the specified crime problem as a proportion of all crime. Only two of the 12 contained rates of crime and two identified patterns of repeat victimization. Of those proposals that included recorded crime data, on average they went back 2.3 years.

Table 4: Crime Data and Analysis Included in a Sample of Unsuccessful Round Two Proposals

ID	Totals	Percentages	Rates	Change	Seasonal/ temporal changes	Repeat victims	Comparisons	Years of data
1	V							1
2								0
3	√					√	V	11
4								0
5	√			√			√	11
6								0
7	1	√		√				2
88	V	√						3
9	√	√		V		V	√	3
10	√				√		√	11
11			·					0
12								0
13			√	√	√		√	3
14	√	V					√	1
15	√			√				2
16								0
17	√	V		1				4
18	V		1	V				4
19								0
20	V			V				3

As with Round One, little use was made of data other than those for recorded crimes. One proposal used incident data. Yet this related to only one year, and what was presented was simply the total number of calls-for-service. Of the other forms of police data used, one proposal made use of arrest data, one of information on detection and one other used police intelligence. Four proposals used other information from police sources, including property recovery rates and numbers of known sex offenders.

Six proposals used data from non-police sources. Most commonly this comprised a fear of crime survey (three of the six). Other sources of information came from the probation service and drugs teams, and a couple estimated the costs of crime. Nine of the proposals used some kind of context data, most commonly measures of population or deprivation. But as in Round One, not one used this information to calculate rates.

Table 5 shows the crime data presented in the 10 sampled successful Round Two proposals.

Though Table 5 shows that as many as half did not make use of recorded crime data at all, this partly reflects the type of problem being addressed. In fact, over all slightly better use was made of data. The crime data listed here were not really relevant, for example, for the financial investigation project, which was primarily aiming to increase the assets seized by the courts. Similarly the repeat offenders project focused on identifying prolific offenders through intelligence, evidence for which was provided. The violence in hospitals proposal used health authority data relating to the number of assaults against staff in the hospitals over four years. This was partly because these data were more easily accessible, though it was also because hospitals often do not report incidents to the police. The antisocial behavior project that did not make use of recorded crime data did make use of complaints to social landlords.

Where recorded crime data were provided, all the proposals went further than merely providing total counts of relevant crime types. Three of the five identified the percentage of that crime type as a proportion of all crime. The alcohol related violence project in particular provided quite detailed analysis of the problem at a local level. It identified "hotspots" and compared local levels of crime with recorded national levels. None of the proposals made any use of incident (callsfor-service) data, despite the fact that three were addressing antisocial behavior.

- 162 -

Table 5: Crime Data and Analysis Included in Successful Round Two Proposals

Project	Totals	Percentages	Rates	Change	Seasonal/ temporal changes	Repeat victims	Comparisons	Number of years
Violence in hospitals								
Antisocial behavior 1								
Repeat offenders							·	
Financial investigations								
Antisocial behavior 2	٧	٧						1
Hate crime	√			√				1
Antisocial behavior 3	7	1						1
Alcohol-related violence	√		√		√		V	1
Drugs 1	٧	٧						1
Drugs 2			<u> </u>					

All 10 of the sampled successful Round Two projects made some use of non-police data sets and other information, but probably no more so than the Round Two unsuccessful projects. Three proposals included data on the target problems from other sources. One used assault data from hospitals, as already indicated. Both of the antisocial behavior projects included complaints to social landlords as a measure of the size of the problem. Five of the projects included demographic and other context information about local deprivation.

However, as in Round One and in the unsuccessful Round Two projects, with the exception of the alcohol-related violence project, proposals did not tend to make use of data, crime or otherwise, for purposes beyond that of estimating the size of the target problem. None of the sampled proposals made any effort to examine repeat victimization. Only one identified rates or hot spots.

Over all, Round Two bids performed slightly better than those in Round One in terms of the scope of data sources used and the detail of the analysis undertaken, but the improvement was not great.

The Best Bid

One TPI bid stood out from the rest for the breadth and depth of its analysis. It seems unlikely that any British force could have done much better at the time without external help. The analysis the bid contains thus shows the limits of what was likely to be achieved at the time.

The problem to be addressed related to drugs and prostitution in one local authority with a population of roughly 200,000. The targeted drug problem concerned crack cocaine across the local authority. The prostitution problem was located in one specific area, comprising some 10,000 residents in about 4,500 dwellings.

A wide range of crime data was provided, comparing the 23 wards that made up the local authority. The data covered:

- monthly domestic burglary counts, rates (by dwelling) and ranks for 1997-98, 1998-99, and 1999-2000;
- annual domestic burglary counts and percentage changes over three years;
- monthly robbery counts, rates (by population) and ranks for 1999-2000;
- annual robbery and personal theft counts and percentage changes over three years;
- monthly theft from person counts, rates (by population) and ranks for 1999-2000;

- annual theft from motor vehicle counts and percentage changes over three years; and
- monthly theft from motor vehicle counts, rates (by population) and ranks for 1999-2000.

Non-crime background data were also provided, again comparing wards. Tables here related to:

- unemployment (for all and by age group and by period of unemployment);
- education and skills (semi and unskilled heads of household, residents aged over 18 with qualifications, pupil profiles);
- health (mortality, birth weight, health deprivation index etc.);
- housing (flats/apartments, rooms, bedsits, social services referrals, benefits claimants, etc.);
- poverty (income support claimants, job seekers allowance recipients, family credit claimants, free school meal recipients etc.); and,
- indices of local deprivation.

These data, alongside some qualitative evidence, showed the target area for the prostitution-related project to be relatively disorderly and deprived by the standards of the local authority.

As well as this information, there was more detailed analysis of the presenting problems and their relationships to one another.

Drugs

In relation to the drugs issue, health authority and police data were interrogated. Data were provided on numbers of callers on drug advisory services with crack as their main drug, numbers of needle kits issued, and the breakdown of clients by age, sex and gender. Further health diagnosis team data were provided estimating numbers of referrals where crack was of primary concern. Police data were presented on drugs seizures, drugs offences, and drug-related crime by time and type, and by the age, sex, ethnicity, address and previous crimes of offenders. Police intelligence was drawn on to clarify the travel patterns of those coming to the local authority to buy illicit drugs.

Attributes of the 72 crack houses identified by the local police intelligence unit were looked at in some detail. Their geographic concentration, customer profile, apparent proximity to transport nodes, forms of tenure, types of accommodation, and occupant prostitution and drug-taking behaviours were described. The frequent discovery of stolen goods during raids, the role of prostitutes as drug runners, and reports of intimidation of nearby residents were also emphasised.

Prostitution

The current location for the problem of prostitution was explained in part as a function of displacement from a nearby area, where efforts to design out prostitution had been implemented some years previously.

Community concerns over prostitution that had been raised with police officers were noted. These included:

- men discomfited by walking past/being approached by prostitutes:
- women discomfited by kerb-crawlers;
- caretakers, parents and teachers concerned at children finding condoms and needles in playgrounds;
- community concern at "sex litter" in parks;
- adverse effects on property values;
- noise, including hooting, car door slamming and highly audible price negotiation between prostitutes and clients;
- sights of overt sexual activity;
- associated problems of crime and disorder; and,
- signs of prostitution leading to perceived danger to residents and neighborhood decline.

Police data on prostitution and kerb-crawling were presented, including:

- incidents of prostitution by time month, day of week and time of day;
- incidents of prostitution by place street, part of street, nearness to station, and impressions of proximity to street drinking and needle find locations;
- prostitute attributes, including age and repeat offending patterns; and,
- kerb-crawler ethnicity, age, and (lack of) repeat offending.

A strong link was drawn between prostitution and the crack houses. This was not just because prostitutes acted as drug runners.

They were also found to be customers for drugs, and they accepted payment in drugs for sexual services.

In the course of the analysis various references were made to ways in which the data might mislead, for example because patterns could reflect police activity rather than the distribution of problem behaviors. Some variations in ways of interpreting the material were highlighted. For example, the association of transport nodes, crack houses and robbery might, it was suggested, reflect either the flow of potential victims from stations or the movements of the many customers of crack houses. Appropriate comparisons were made with the findings of relevant, previously published research studies.

The major conclusions drawn from this analysis, notwithstanding the acknowledged data problems and uncertainties over their interpretation, were that:

- the borough had a significant and increasing drugs problem;
- crack houses comprised a "closed" market for crack; and,
- there was a link between prostitution and crack.

The proposed strategy was:

- to disrupt the drugs market and prevent its re-establishment, targeting crack houses in particular;
- to disrupt the relationship between prostitution and crack;
- to remove the association between prostitution and the area in which it flourishes; and,
- to prevent any further area in the local authority developing the same set of problems.

This was to be achieved by:

- periodic intensive policing efforts, including "sustained high visibility patrol";
- provision of exit strategies for prostitutes wishing to change and leverage on those not wishing to do so in the form of Anti-Social Behavior Orders (ASBOs);
- environmental improvements to make prostitution more difficult;
- enforcement activity against crack houses; and,
- support for the community and environmental improvement to prevent the re-establishment of crack houses.

This analysis stood out from others in several respects. There was more use of available recorded crime data. Both quantitative and qualitative materials were used. Several complementary data sources were drawn on. The patterns described went over several years. The account of the results refers to other published research to put local findings in context. The data are treated with proper caution — their reliability and validity are not taken for granted — but nor are they summarily dismissed. There are efforts to interpret the data, not to assume that they speak for themselves. There were attempts to describe significant resources for offending, features of crime locations and attributes of known offenders in what were generally "victimless" crimes. Moreover, the strategy proposed following the analysis had some logic to it. It involved marrying crackdowns on crack houses and prostitution, which might be expected to yield short-term effects, with longer-term situational and social measures to achieve sustained improvements. No other bid enjoyed this range of positive qualities.

Yet it is not difficult at the same time to cavil with some of the analysis. The relevance of some of the material, for example on deprivation and general offence patterns, was neither self-evident nor explained. Where the data were deemed merely to reflect police activity their relevance was again not certain. Routinely recorded attributes of offenders were summarized, but the significance of these attributes was not, for the most part, explained. The major conclusions could have been drawn from a much more tightly drawn (and briefer) analysis or, indeed, without any formal analysis. The analysis is difficult to summarize, in part because it seems to amount to an account of "all we could find out about" drugs and prostitution in the local authority, rather than a targeted analysis to inform a preventive strategy. No significant efforts were made systematically to break the problems down into sub-types or sub-elements, or to test the hypotheses to emerge from what were essentially exploratory opportunistic analyses of readily available data. Whilst the strategy seemed to make sense, was consistent with the data, and had the advantage of looking to both long and short-term effects, it did not follow from the analysis. It simply followed it. The circumstances of the problem were not looked at in ways that suggest whether or not the strategy was a plausible one in the particular conditions in which the problem was manifested.

The criminologist assessors of the bid located the reported findings in a criminological framework, referring to the target neighbourhood as a "zone of transition." They also advocated a number of amendments and extensions to the proposed strategy. These referred to specification of:

• the means to mobilize local resident support especially in schools,

- the provisions to be made for those sex workers and drug users suffering mental health problems, and
- the kind of efforts that were to be made to pre-empt the relocation of further linked drug and sex markets elsewhere, presuming success in dislodging them from the target area.

The assessors also advocated coordination of work by the varying partners to the proposed initiative to avoid the pursuit of conflicting goals. They noted the potentially very high costs that could be incurred through environmental improvements.

The proposers' response to the bid assessors' report included a sharpened and more detailed strategy that covered the gaps that had been highlighted. It provided no further analysis of the problem, but did refer to further work on a full "environmental audit" of the area. The aim of the project was at this point said to be, "To improve the quality of life of the local authority residents by disrupting the local crack market." The specific objectives "following problem analysis" were: "to rid the target area of its connection with prostitution," and "to disrupt the local authority's closed drugs market." The planned initial spending over 18 months was £1.5 million.

This successful bid to the Targeted Policing Initiative might not show the very best problem-oriented policing analysis that can currently be achieved in a British Police Force without external specialist help, but it is certainly amongst the best.

DISCUSSION

Over all the analyses included within the Targeted Policing Initiative of the Crime Reduction Programme have been limited in scope, detail and in some cases relevance to dealing with the problems that were targeted. What was generally missing were efforts to break presenting problems down into sub-types relevant to prevention, or to unpack in detail what went on in the problematic behaviors, or to focus on significant ways in which the mechanisms producing the problems might be impacted. It is sobering to compare these efforts with, for example, the Boston Gun Project (Braga et al., 1999), the Charlotte-Mecklenburg work relating to thefts of appliances from houses under construction (Clarke and Goldstein, 2002), or the Kirkholt Burglary Reduction Project (Forrester et al., 1988, 1990). The latter all produced analyses that honed the definition of the targeted problems, and identified potential points of leverage to impact on their recurrent generation. They did so, though, over a much longer period than was available for the preparation of the bids reviewed here, a matter returned to below.

The problems found here in relation to analyses within the Targeted Policing Initiative are not uncommon. Other parts of the Crime Reduction Programme, though not explicitly linked to problemoriented policing, called for a similar approach. The Reducing Burglary Initiative (RBI), for example, required bidders to identify areas that exceeded a given threshold rate, analyse the problem and propose responses, preferably innovative ones. The RBI bids likewise used very limited forms of analysis (Tilley et al., 1999) and a report was produced giving case studies that showed what might have been achieved with more thorough and creative analysis (Curtin et al., 2001).

More generally, overviews of problem-oriented policing in the U.K. (Read and Tilley, 2000) and in the United States over the past 20 years (Scott, 2000) have highlighted weaknesses in analysis. Indeed, Scott points out that, "By most accounts from those who observe problem-oriented policing carefully, problem-analysis remains the aspect of the concept most in need of improvement" (Scott, 2000:59). The preceding account of analyses included in Targeted Policing Initiatives within Britain's Crime Reduction Programme likewise finds them to be lacking.

What, if any, are the implications of these consistent shortcomings for the project of problem-oriented policing? Four possibilities are briefly considered here:

- (1) that prevailing assumptions about what is possible in analysis for problem-oriented policing have been refuted, and that this undermines the whole approach;
- (2) that developing the capacity for strong analysis in problemoriented policing will take longer than had been hoped, but eventually with help and encouragement shortcomings will be remedied:
- (3) that the Targeted Policing Initiative provided an inadequate and inappropriate vehicle for encouraging and enabling problem-oriented policing; or,
- (4) that some rethinking is called for relating to the ways in which analysis for and in problem-oriented policing should be conceived and delivered.

Have Prevailing Assumptions about Analysis for Problemoriented Policing been Falsified, Undermining the Whole Project?

Problem-oriented policing has common-sense appeal. Identifying and defining problems systematically and without prejudice, on the basis of evidence and analysis, sounds right. Devising tailored responses based on grasping the specifics of a given problem setting also seems sensible. Putting this in the hands of police services that pride themselves on a can-do attitude looks as if it should work. Moreover, there are many examples of police work where careful attention to a problem and lateral thinking about responses have produced remarkable achievements. For example, seeing broken windows in a tourist attraction as a problem of loose rubble rather than loose people, as happened in Oakham, required no more than accepting responsibility to address the problem and imaginatively redefining it.² In addition, there is nothing to suggest that the critiques of prevailing models of policing that animated the proposals for problem-oriented policing are invalid. Indifference to many community concerns for crime, disorder and feelings of insecurity does indeed miss the point of policing (for an account of the sub-set of community issues relating to crime, security, and protection that are relevant to the police see Goldstein, 1977). Moreover, dependency on traditional patrol and enforcement responses means neglecting many potentially effective ways of dealing with problems. Responding to similar incidents in the same area repeatedly is wasteful and fails to deal with the problem. For these reasons, the case for systematic problem-oriented policing remains as strong as ever.

It is when the problems require more than careful attention and a modicum of lateral thought that weaknesses in analysis in problem-oriented policing create difficulties. And it is this aspect of problem-oriented policing that has become questionable in the light of experience. We may have wrongly assumed that the common sense which can be so effective when used by conscientious officers in relation to specific local problems can readily be scaled up to deal with more substantial and more widespread issues.

Known examples of strong analysis are relatively uncommon and seem to have required something more than raw common sense and the application of standard analytic techniques. Instead, imaginative methods of analysis, often using non-standard data, informed by theory and previous research findings have rarely taken place. This type of activity may be the stock in trade of universities and some government social research groups. It does not seem to be habitual in other public sector organizations, and there is no reason why this should be the case. Theoretically informed, technically sophisticated, open-minded, imaginative analysis involving casting around for alternative data sources where those readily available are not appropriate is a high-order research activity. It calls for unusually able people with advanced education, technical training, and experience in quite basic research. It may be unreasonable to expect these abilities and attitudes to be found widely in police services.

Is Developing the Capacity for Strong Analysis in Problemoriented Policing Something That Can be Achieved Only in the Long Term, With Help and Encouragement?

Perhaps the weaknesses repeatedly found in analysis in problemoriented policing simply reflect the extent of the transformation needed for police organizations to become genuinely problemoriented.³ It will just take a long time. Moreover, we should be encouraged by small improvements such as those found between Rounds One and Two of the Targeted Policing Initiative.

There are certainly growing numbers of analysts working in British police services. What they currently do, though, appears to be more oriented to a detection and enforcement agenda, and to satisfying performance indicator requirements, than it is to an agenda concerned with dealing with police-relevant community problems. Moreover, the supply of analysts with the theoretical understanding required for systematic problem-oriented policing is currently very limited. Few relevant courses are available.

All these difficulties suggest that, though an increasing number of analysts are employed in police services, they are not yet contributing much to making good the weaknesses in analysis in problemoriented policing. There are, though, efforts in hand to build their capacity to do so.

First, the Jill Dando Institute of Crime Science at University College, London is furnishing an academic center in Britain where for the first time there will be teaching and research focused on the forms of analysis required of problem-oriented policing. Second, Ron Clarke and Marcus Felson are preparing a handbook for analysis under Home Office auspices. To be published alongside this will be a problem-oriented policing guide for practitioners which will identify strategic and practical issues for those seeking to implement problem-oriented policing. Third, Paul Ekblom has prepared a comprehensive framework intended to guide policy makers, practitioners and researchers through the process of prevention — giving discipline, coherence and structure to their activities — that should guide analysis (Ekblom, 2002). Fourth, Tilley and Laycock have attempted to lay out in some detail the basic questions needed to work out what to do to develop preventive strategies. This gives guidance on the patterns that local analysts could usefully tease out (Tilley and Laycock, 2002). Fifth, the United States Office of Community Oriented Policing Services' Problem-Oriented Guides for Police series (COPS Guides) provide detailed problem by problem research-based pointers to the ways local manifestations of those problems should be interrogated to devise promising responses. Moreover, it is planned that these should grow in number and scope. There are 17 at the time of writing. Finally, the Home Office has produced a series of "toolkits" that are designed again to deal with specific problems.

The common thinking behind all these developments is that there is a need to upgrade the analyses occurring in problem-oriented policing, and crime prevention more generally. The common thread running through them all is that analysis of specific local problem patterns needs to be informed by research-based principles. It cannot rely solely on raw common sense. The common assumption is that analysis within police services can be improved, and that with this there will be improvements in problem-oriented policing. We have yet to see whether this is the case. In the long run, the impact of these kinds of developments on analysis and problem-oriented policing will be at least partly dependent on the extent to which they are routinely adopted by practitioners in police forces.

Able, self-motivated individuals, who do develop an orientation to problems and those skills in analysis that can improve understanding of problems and inform the development of appropriate interventions, are liable, however, to enjoy better prospects away from the police. Unsurprisingly, whilst there are often good career paths for talented police officers, they are much more limited for analysts. Experienced, capable analysts will seldom stay long in police agencies in current conditions. High quality graduate analysts currently soon leave.

Did the Targeted Policing Initiative Fail to Provide a Suitable Vehicle to Enable and Encourage Problem-oriented Policing?

The comparisons with the Boston gun project, the Kirkholt burglary prevention project and the Charlotte-Mecklenberg thefts from construction sites work are unfair and inappropriate. In all those exemplary cases the analyses were conducted at much greater leisure. Sharpened problem definitions only emerged after a period of reflection. Sheets remained relatively blank for much longer than a month. What the month available for initial bid preparation offered, at best, in the Targeted Policing Initiative was time for scanning, from which only provisional conclusions could be drawn. A much longer initial period would have been needed to make progress in more adequately defining and understanding the problem for effective response-development purposes.

Nevertheless, even as "scanning," in terms of the SARA (Scanning, Analysis, Response, Assessment) model, the Targeted Policing Initiative bids were disappointing. Moreover they did not generally act as precursors to a more extended process where interventions remained

open for a significant period of time. In so far as the funding regime of the Targeted Policing Initiative itself provoked premature closure over problem-definitions and measures to address them, ironically it may, of course, have undermined that problem-orientation it was intended to promote. The Kirkholt Burglary Reduction Project, the Boston Gun Project and the Charlotte-Mecklenburg construction site show that even with the very strong external academic support each enjoyed, quite a protracted period was needed to develop those accounts of the problems addressed, which opened the way to effective responses. The Targeted Policing Initiative bidding timetable may have encouraged the assumption that scanning (and analysis) of complex problems could be undertaken in just a very few weeks.

It should also be pointed out that the bids for support from the Targeted Policing Initiative were made at a time when competitive, opportunistic bidding for funding was commonplace. The initiative constituted one pot of money amongst many for which speculative applications were being made. That it might require anything different by way of analysis from the usual called for to elicit financial support is unlikely to have been apparent to those making the bids. "The usual" would not entail the kinds of detailed work on problem specification and understanding called for within problem-oriented policing.

Is Some Rethinking Required Relating to Analysis for and in Problem-oriented Policing?

It may be useful to distinguish between different categories of problem, which have rather different analytic needs. Four are set out here. These comprise repeat incident prevention, attention to specific local problem generators, generic problems with strong research-based responses, and generic problems without strong research-based responses.

(1) Repeat Incident Prevention: Research on repeat victimisation consistently finds elevated risks of repeat incidents, especially in the short term (Pease, 1998; Farrell and Pease, 2001). This strongly suggests that a preventive orientation to incident scene attendance offers potential dividends; the increasing risks following successive incidents suggests the potential benefits of increasing intensity in attention. Each incident furnishes a relatively targeted opportunity for problem solving. A problem-oriented police service calls for this, maybe with specified forms of intensified attention following successive incidents. Elaborate analysis will not be needed, though some quite advanced data manipulation skills might be required in order that repeat patterns can be identified from police systems in the first

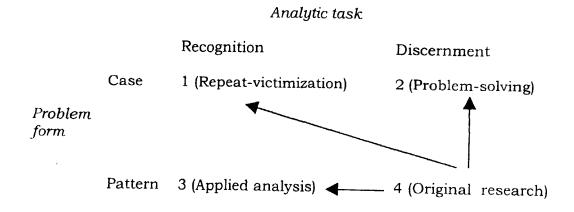
place. Moreover, there is a research base to the cumulative interventions that can be put in place following incidents and their recurrence.

- (2) Attention to Specific Local Problem Generators: Some effective local problem-oriented policing relies upon committed and clever police officers focusing on problems and looking at them imaginatively for aspects open to preventive attention. The Oakham Castle case is a good example. It did not require extensive analysis of the problem. Instead it required diligent application of common sense and an ability to look for interventions that do not rely on enforcement. This is not to say that these problems are simple. In retrospect the solution may be obvious (and often elegant), but some inspiration is needed to light on it. Some perspiration may then also be needed to effect the implementation of the measure. Routinely to find these points of crime concentration, to mobilise attention to generators, will require some basic analytic capacity. Moreover, past research and past experience may catalyse/inform thinking about non-standard responses (see, for example, Brantingham and Brantingham, 1984; Felson, 1998; Clarke, 1997).
- (3) Generic Problems with Research-Based Responses: The COPS guides comprise outstanding efforts to distil research findings relating to a series of specific, but recurrently encountered problems. They emphatically do not provide blueprints. What they do is to indicate what sorts of questions are relevant to particular types of generic problems, to work out what might be put in place to deal with in their specific local manifestation. The guides already published relating to street prostitution (Scott, 2001) and drug dealing in privately owned apartment complexes (Sampson, 2001), for example, could have informed the analysis for the drugs and prostitution project proposal discussed earlier had they been published at the time of Round Two of the Targeted Policing Initiative.
- (4) Generic Problems Without Adequate Research-Based Responses: For many frequently found problems, there is insufficient research-based experience to provide adequate guides. They require strong, original research input to develop an adequate definition of the problem and/or to try to work through potentially effective responses. Problem-patterns themselves can be far from self-evident. Identifying them will require a capacity for original research.

Figure 1 shows the relationship between the four identified orders of problem and their analytic requirements.

Original research helps guide more routine applied analysis to recognize problem patterns. This is no different from the applied analytic services springing from the natural sciences, such as those used in medicine or forensic science. Following pioneering research, standard techniques can be used to recognize case types for interpretation and intervention. The arrows going from the original research involved in pattern-discernment show the role of this in focusing the (often highly skilled) analysis that will be required to recognize problems. The two "recognition" problem-types describe, on the one hand, individual cases comprising problems calling for attention, and, on the other hand, patterns underlying presenting problems that are open to preventive intervention. The substantial volume of research on repeat victimization has revealed the crime preventive potential of targeting victims and repeat victims for problem-solving attention. The COPS guides cleverly tease out ranges of underlying patterns, established by research, that may be present in what at first sight seem similar presenting problems. Case discernment may also be facilitated by research, though it is not always necessary. Research within environmental criminology and situational crime prevention may help define cases and ways in which they can usefully be examined for problem-solving purposes, but inspired and committed police officers capable of lateral thought may not need such aids. Original research can continuously feed the evidence bases for the forms of applied analysis needed to recognize cases and patterns.

Figure 1: Orders of Problem in Problem-oriented Policing with Varying Analytic Needs



Experience so far suggests that British police services are not yet equipped for basic research, and there is, perhaps, no reason to expect them to be in the future. It requires time, experience, skills and rather distinctive ways of thinking that it may simply not be possible to provide in a police setting. The assumption that strong basic analysis is needed for all problems relevant to problem-oriented policing is dubious. Much good work may take place without it. Expecting it is liable to lead to unrealistic expectations and inappropriate disappointment with what is deemed inadequate, at least by the standards of the research community. The Targeted Policing Initiative may have exemplified this inappropriate expectation, and this paper may reflect the unwarranted disappointment with the qualities of the analyses contained in bids.

When it comes to recurrent generic problems with inadequate research to guide police analysts, the best in the applied research community need to become involved in the original and creative research to feed guides for local analysts, ideally working closely with the police. Indeed, the conclusion within the Targeted Policing Initiative team was that greater direct help with analysis was needed. This explains first the greater use of academic advisors in Round Two to help refine bids, and secondly why the rural crime, Manchester gun and Knowsley projects were operated differently from the rest of the program and included substantially greater researcher involvement. Indeed, the Knowsley project reflected a growing sense that local analytic capacity had generally been found inadequate. It involved putting a very senior researcher (Ken Pease) in a police station for two days a week alongside a full-time post-doctoral researcher (Michael Townsley) to work with the local police in providing problemoriented policing analytic capacity. These developments also reflected growing recognition that the Targeted Policing Initiative might not have succeeded in encouraging and enabling the problem-oriented work as had originally been intended. They allowed much more time for problems to be defined and analyzed prior to the development of response strategies.

Guides rooted in strong applied research, of the sort currently being produced, can then inform the sort of analysis that will still be needed locally to determine plausible responses to problems. This in turn will still require a population of competent local analysts but not necessarily ones with advanced research abilities. Even this, however, may prove rather taxing. One officer has been heard to describe the COPS guides as ABCs for problem-oriented policing.

CONCLUSION

The main part of this paper has shown the limitations in the analysis included in bids to the Targeted Policing Initiative in the British Crime Reduction Programme, even where there were substantial incentives for strong analysis. Even the best that was produced had some significant weaknesses. Four possible implications were then considered — that the problem-oriented policing project has been shown to be fatally flawed, that the project will take longer than had been hoped or expected, that the Targeted Policing Initiative was inadequate for bringing out strong analyses in funding bids, and that some adjustments to our conception of problem-oriented policing (at least in Britain) are called for.

Over all, though the case for problem-oriented policing remains strong, evidence consistently shows that the prevailing expectations of analysis within police services have been unrealistic. Though the Targeted Policing Initiative focused on in this paper may have failed to provide adequate conditions for strong analyses to be evidenced in bids for funding, the weaknesses revealed in the selection, collection and processing of data suggest that the analytic capacity of the British Police has been rather limited. Recent efforts to increase this analytic capacity, assuming that they are adopted throughout the police service, may produce improvements.

Nevertheless, it is felt unlikely that analysts will ever be able to provide the original research input required for defining and dealing with problems for which there is not already a research literature. For these, much greater strong, applied research input is needed. The products of this could feed guides of the sort being produced by the U.S. COPS office that, in turn, should enable local analysts to examine manifestations of problem types to determine what might be appropriate responses. All this, though, need not exhaust problemoriented policing. Much relevant work can take place without being burdened by the need for systematic analysis.

There is scope for a wide range of problem-focused work in police services. The literature over the past few years provides strong research grounds for the police to pay increasing, cumulative attention to those who have been victimized and revictimized. There are many examples of talented police officers dealing with specific local problems generating crimes and calls-for-service. These problem-focused activities need to be actively nurtured and encouraged with leadership, training and rewards. They do not, however, require a heavy analytic input. More complex, more widely distributed recurrent problems with multiple and variable causes and conditions require systematic analysis. To the extent that there is an adequate literature

to draw on, the analysis may involve diagnosis into relatively well-known problem types and categories with tried and tested menus of interventions. To the extent that the existing literature is inadequate, more pioneering research may be needed.

There are, thus, different orders of activity to be encouraged and enabled across a broad agenda of increased attention to police-relevant community problems. It may be unhelpful to lump all these together. They call on different people and different skills. Whether they should all be put under the umbrella term problem-oriented policing, or whether some should be called problem solving and some problem-oriented, is a moot point. What is more important is to acknowledge that they have differing requirements and that analytic shortcomings inhibit police capacity to develop targeted strategies to define and deal with complex, widespread generic problems.



© Crown copyright 2003. Reproduced by permission of the Controller of Her Majesty's Stationery Office.

Address correspondence to: Nick Tilley, 35 Ebers Road, Mapperley Park, Nottingham NG3 5DY, UK. E-mail: <tilley@home-office.swinternet.co.uk>.

Acknowledgments: Special thanks are due to Herman Goldstein, who acted as discussant for this paper at the Norwegian workshop where the papers collected in this volume were discussed. He corrected some significant errors. We would like also to thank other members of the seminar for their thoughtful comments. We are grateful too to Tim Read, Gloria Laycock and Verity Ridgman for commenting on other versions produced before and after the meeting in Norway.

REFERENCES

Braga, A., D. Kennedy and A. Piehl (1999). "Problem-Oriented Policing and Youth Violence: An Evaluation of the Boston Gun Project." Unpublished Report to the National Institute of Justice, Washington DC.

Brantingham, P. and P. Brantingham (1984). *Patterns in Crime*. New York: Macmillan.

- Bullock, K., G. Farrell and N. Tilley (2002). *Funding and Implementing Crime Reduction Initiatives*. (On line only publication, 10/02.) London, UK: Home Office.
- Clarke, R. (1997). Situational Crime Prevention: Successful Case Studies. New York: Harrow and Heston.
- ——and H. Goldstein (2002). "Reducing Theft at Construction Sites: Lessons from a Problem-Oriented Project." In: N. Tilley (ed.), *Analysis for Crime Prevention*. (Crime Prevention Studies, vol. 13.) Monsey, NY: Criminal Justice Press.
- Curtin, E., N. Tilley, M. Owen and K. Pease (2001). *Developing Crime Reduction Plans: Some Examples from the Burglary Reduction Initiative*. (Crime Reduction Research Series Paper No. 7.) London, UK: Home Office.
- Ekblom, P. (2002). "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, vol. 13.) Monsey, NY: Criminal Justice Press.
- Farrell, G. and K. Pease (eds.), (2001). *Repeat Victimization*. (Crime Prevention Studies, vol. 12.) Monsey, NY: Criminal Justice Press.
- Felson, M. (1998). *Crime and Everyday Life* (2nd ed.). Thousand Oaks, CA: Pine Forge Press.
- Forrester, D., S. Frenz, M. O'Connell and K. Pease (1990). *The Ktkholt Burglary Prevention Project: Phase II*. (Crime Prevention Unit Paper No. 23.) London, UK: Home Office.
- ——M. Chatterton and K. Pease, with the assistance of R. Brown (1988). *The Kirkholt Burglary Prevention Project, Rochdale.* (Crime Prevention Unit Paper No. 13.) London, UK: Home Office.
- Goldblatt, P. and C. Lewis (1998). Reducing Offending: An Assessment of Research Evidence on Ways of Dealing with Offending Behaviour. (Home Office Research Study No. 187). London, UK: Home Office.
- Goldstein, H. (1990). Problem-Oriented Policing. New York: McGraw-Hill.
- ——(1979). "Improving Policing: a Problem-Oriented Approach." *Crime & Delinquency:* 234-58.
- ——(1977). *Policing in a Free Society*. Cambridge, MA: Ballinger.
- Her Majesty's Inspectorate of Constabulary (2000). *Calling Time on Crime*. London, UK: Home Office.
- ——(1998). *Beating Crime*. London, UK: Home Office.
- Irving, B. and N. Dixon (forthcoming). *Hotspotting*. London, UK: Police Foundation.

- Leigh, A., T. Read and N. Tilley (1998). *Brit Pop II Problem-Oriented Policing in Practice*. (Crime Prevention and Detection Series Paper No. 93.) London, UK: Home Office.
- T. Read and N. Tilley (1996). *Problem-Oriented Policing: Brit Pop.* (Crime Prevention and Detection Series Paper No. 75.) London, UK: Home Office.
- Pease, K. (1998). *Repeat Victimisation: Taking Stock*. (Crime Detection and Prevention Series Paper 90.) London, UK: Home Office.
- Read, T. and N. Tilley (2000). *Not Rocket Science? Problem-Solving and Crime Reduction*. (Crime Reduction Research Series Paper No. 6.) London, UK: Home Office.
- Sampson, R. (2001). *Drug Dealing in Privately Owned Apartment Complexes*. (Problem-Oriented Guides for Police Series No. 4.) Washington, DC: Community Oriented Policing Services, U.S. Department of Justice.
- Scott, M. (2001). *Street Prostitution*. (Problem-Oriented Guides for Police Series No 2.) Washington, DC: Office of Community Oriented Policing Services, U.S. Department of Justice.
- ——(2000). Problem-Oriented Policing: Reflections on the First 20 Years. Washington, DC: Office of Community-Oriented Policing Services, U.S. Department of Justice.
- Tilley, N. and G. Laycock (2002). Working out What to Do: Evidence-Based Crime Reduction. (Crime Reduction Research Series Paper No. 11.) London, UK: Home Office.
- K. Pease, M. Hough and P. Brown (1999). Burglary Prevention: Early Lessons from the Crime Reduction Programme. (Crime Reduction Research Series Paper No. 1.) London, UK: Home Office

NOTES

- 1. These are charities concerned respectively with rape victims and personal safety.
- 2. This took place in the Leicestershire demonstration project introducing problem-oriented policing (Leigh et al., 1996, 1998). Prior to removing the rubble, the police response had been periodically to lie in wait for stone throwers within the building and to rush out to arrest them when they began throwing stones. This response was both expensive and ineffective. The rubble-removal evidently solved the problem cheaply and immediately.

3. Important though they are, weaknesses in analysis are, of course, far from the only obstacles to the successful implementation of problem-oriented policing.