



CRIME, SCIENCE AND POLICING



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Abstract: In almost every country on earth the primary means used by governments in the control of crime involves the use of a criminal justice system – police, courts and prisons etc. This paper will suggest that, important though these are for delivering justice or retribution, they are not fit for purpose in the 21st Century as a major means of crime control. Much greater emphasis needs to be placed on science and experimentation in developing ways to control crime and particularly in stopping it before it happens. The paper argues for the introduction of crime science as an appropriate discipline upon which to base a more rational and empirical approach to crime reduction and discusses the characteristics of this approach and what it might mean in practice.

1. INTRODUCTION

Crime ⁽¹⁾ rates are notoriously difficult to measure and we can argue at length about whether or not crime is rising, falling or staying the same. In this paper it is accepted that in general rates of crime rose throughout a large part of the last century in most of the advanced western democracies – Europe, the USA, Australia and so on. Much of this rise, as has been argued elsewhere, was due to the

increase in the availability of desirable goods and the changes in social organisation that facilitated theft, burglary and other property crime (Felson and Clarke, 1998; Felson, 2002). As illustration Figure 1 below shows the rise in crime per 1,000 population in England and Wales from 1918-1993.

Along with the rise in crime we saw a rise in the prison populations. In the UK, for example, the prison population rose by 2.5% per annum from

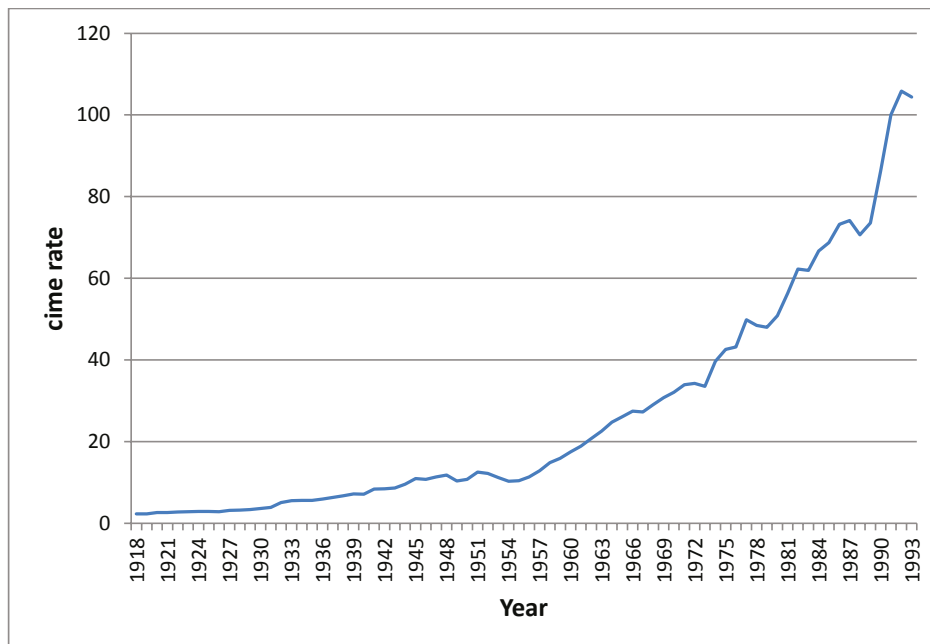


Figure 1: Crime rate per 1,000 population, England and Wales – 1918 -1993

⁽⁸⁾ Although this paper discusses crime the discussion applies equally to disorder and anti-social behaviour, organised crime and terrorism.





1945-1992 and then continued to grow by 4% per annum until 2008-2012 when the annual growth fell back to 1%. In other words an active criminal justice system (CJS) – did not contain the crime rate.

In practice this lack of efficacy is hardly surprising. Figures from the UK Home Office show attrition through the CJS in England and Wales. For every 100 offences committed (as estimated from crime surveys) the public only report about 50 to the police of which 30 are recorded: This 30 result in 7 offences being cleared up and only 3% resulting in a conviction or a police caution. In addition to illustrating attrition through the system the data provide evidence of the low probability of capture, which offenders quickly learn. It also suggests that if we wish to reduce the top line figure of crime then we have to think more about preventing the crime from happening in the first place rather than dealing with it after the event.

So to summarise: Crime rose throughout the latter part of the 20th Century in most western democracies; imprisonment failed to contain that rise; offenders learned that in general they were more likely to escape punishment than not (although this clearly varied by offence (see Burrows, et al, 2005), and the CJS, as a major means of crime control, within the limits set in our societies ⁽²⁾, is failing.

2. HOW MIGHT WE RESPOND TO CRIME?

If the present system has failed what might replace it? The argument in this paper is that more emphasis needs to be placed on the prevention of crime before it happens within an overall context of experimentation and learning. This experimentation should permeate all aspects of society's response to crime including the CJS but not restricted to it. In other words we need to learn how better to prevent crimes and be prepared to experiment both before and after the event. In this way we will build up a body of knowledge on what works, not only in relation to State funded police agencies but to policing in the broadest possible sense – we will have an evidence-base to support decisions.

Becoming more experimental means behaving more scientifically. Carrying out experiments is a defining characteristic of science. Scientists are (ideally) rational; they base their arguments upon logic and they use data. In carrying out experiments they formulate hypotheses and use scientific method to test their ideas. If we take this approach into crime control what would we do? The answer is that at least in the policing field, we would adopt problem oriented policing (Goldstein, 1997) and use the SARA process (Eck and Spelman, 1987) or something like it. SARA stands for scanning (S: taking a broad look at the crime issues across an area and deciding on the nature of the problem); analysis (A: analysing the problem characteristics in depth and particularly looking to identify the opportunities that facilitated the commission of the crime with a view to taking action to remove those opportunities); response (R: the action taken which needs to be clear on the mechanism through which the offending will be reduced (Pawson and Tilley, 1997; Tilley and Laycock, 2002) and finally assessment (A: was the desired effect achieved?).

This process is not trivial. There are issues associated with research design, implementation, ethics, aesthetics and resources all of which need to be considered in the course of working through SARA. We have called this overall approach 'crime science' (Laycock, 2001; Smith and Tilley, 2005) now expanded to crime and security science in acknowledgement of the inclusion of terrorism and organised crime in particular. Crime Science is meant to summarise a number of elements through which crime might be better managed and knowledge on what works more systematically developed. Note it is not called police science. This is because it is about the scientific understanding of crime not of the police, rather as medical science is not called doctor science. Crime science is seen to include not only the police in the control of crime (and by implication the criminal justice system to which the police are seen as the gatekeepers) but also local government agencies, schools, communities, parents and civil society in the broadest sense. As indeed is the case in the field of medicine where it is not only the doctors who maintain health but the government (through the provision of drains, sewers and inoculation systems); adults and parents (in encouraging hygiene in their homes and in their children); industry and commerce insofar as they pay heed to food safety and other aspects of health and welfare.

⁽²⁾ If we were massively to increase police numbers or introduce harsher or more punitive punishment then the situation might be different but for reasons of cost, ethics, justice and proportionality we do not do this.



Similarly with crime prevention, where everyone has a role to play from the individual in taking care of their goods, homes, family members and community to the local government in the careful design of street layout and housing through to industry and commerce in the design of goods and services with crime prevention in mind. It is the responsibility of the government to provide the police, courts, prisons and so on but also to create a context within which we can all take responsibility for crime prevention.

The involvement of the designers of goods, services and systems raises the important extent to which other academic disciplines might be involved in crime control. Engineers, for example, have a role to play through their expertise related to systems engineering, electronics and computer design. Similarly other scientists – for example chemists, biologists or botanists – can all assist in the prevention, disruption or detection of crime. In other words almost every discipline has a contribution that might potentially be made to crime control. Reflecting this, crime science can again be compared with medical science as a multi-disciplinary approach to a complex problem.

But perhaps the most relevant aspect of crime science to policing is in the application of scientific method – the articulation and testing of hypotheses, which is involved at every stage of the SARA process. So, for example, the first question is do we have the right problem? If we observe that mobile phones are being stolen in a particular

area then we might hypothesise that professional thieves are taking them to sell on at a profit. An appropriate response might be to redesign the phone so that it no longer works when stolen. But further analysis might show that the phones were disproportionately stolen by school children, from each other, on the way to and from school. The problem is not one of mobile phone theft but of school bullying – and this might involve a quite different response reflecting the re-characterisation of the problem.

3. DOES IT WORK?

There is evidence that this approach works and at various levels. For example, in England and Wales the theft of and from vehicles was significantly reduced by problem solving action taken by central government in the early 1990s in pressing the motor manufacturers to fit deadlocks and immobilisers at the point of manufacture (Laycock, 2004; Farrell, et. al., 2011). By 2012 theft of and from vehicles had reduced in the England and Wales by over 65%. Similarly, work by Tilley et al (2011) shows that the reductions in domestic burglary are related to increases in security and further work by Farrell (2013) supports the general hypothesis that the crime drops that have been observed are related to a reduction in opportunities due to increased security.

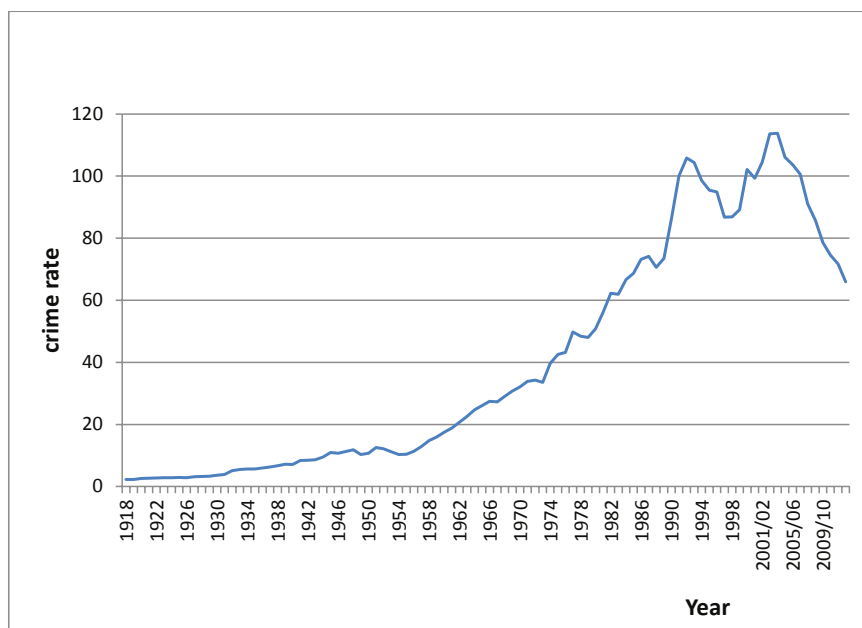


Figure 2: Crime rate per 1,000 population, England and Wales – 1918 -2013



The extent of the crime reduction in England and Wales is shown in Figure 2 below. It covers the period 1918-2013 for comparison with Figure 1. (n.b. The changes from 1999-2003 approximately are caused by changes to the counting rules and shift to measurement by financial year.) Figure 2 illustrates not only the prolonged increase in crime but also the dramatic reductions in more recent years.

A systematic review of problem oriented policing has also shown the approach to be effective when implemented at local level (Weisburd, et al, 2010). For example, the Goldstein Awards in the USA or the Tilley Awards in the UK are presented on an annual basis to local police or partnerships who have demonstrated reductions in policing problems using the SARA process. These initiatives are carried out by staff who have tackled local problems and learned from the process. Descriptions of successful projects are available on the website www.popcenter.org which includes all the Goldstein and Tilley winners but also a significant number of research reviews on how to deal with highly specific problems such as robbery at automatic teller machines or prostitution in motels.

It is important to note that it is not the systematic application of the SARA process that reduces crime but the results of that process. The correct identification of the problem, the creative analysis of the data and the introduction of the appropriate mechanism in the relevant context lead to the outcome of crime reduction. The mechanism is the 'active ingredient', the means through which the presenting problem is reduced. At present we know of five mechanisms, which, either singly or in combination, might reduce crime in a given context. These are intended to affect the decision making process of the potential offender and have been described by Clarke and others as: Increasing perceived risk, increasing effort, reducing rewards, reducing provocation or removing excuses (see for example, Clarke and Eck, 2003).

The challenge for the would-be crime preventer is to introduce initiatives in response to defined problems within specified contexts which fire those mechanisms, and thus lead to a change in the outcome – i.e. a reduction in crime. So, for example, in certain circumstances the introduction of CCTV might lead to a reduction in crime because the risk of offending was seen to have increased (capture is perceived as more likely) and/or the effort was increased (e.g. the offenders had to find an alternative location which they believed was

not overlooked by active camera systems and thus decided to 'give up'.)

4. FUTURE DEVELOPMENTS

Much of this is not new. There are many small-scale evaluations of locally based initiatives available on specialist websites such as the US POP Center website, or systematic reviews of what research has shown to work, such as the Campbell Collaboration (see www.campbellcollaboration.org) or crime solutions (www.crimesolutions.gov). Many of these activities are supported by central governments such as the US Justice Department or the Home Office in the UK but the 'take-up' by the police has tended to be patchy and to be dependent upon the interests of individuals rather than being part of the corporate culture of the police. There is now, however, a growing appetite amongst governments to encourage the police (and other professionals) to base their decisions upon established bodies of evidence rather than treating the task as a craft-based exercise, which can be learned from experience alone. This is to some extent being driven by the economic need to maintain the recent reductions in crime against a backdrop of reduced public sector resources.

To strengthen this approach the UK Government, for example, has established six 'What Works' Centres covering various aspects of public policy including crime reduction. The What Works Centre for Crime Reduction is based at the new College of Policing, which is specifically remitted (inter alia) to identify, develop and promote good practice based on evidence. This What Works Centre is supported by a £3.2m investment from the Economic and Social Research Council and the College itself, which is to fund a consortium of eight universities across the UK. Over the next three years the Consortium members, working with advisors from other universities around the world will carry out a series of systematic reviews of what works in crime reduction to inform both policing and the work of other agencies with an interest in or remit to address crime reduction. In addition to carrying out the reviews the programme is to include the development of a pilot training programme for the police in the use of the resultant material and the interpretation of research evidence more generally.

All this is not to deny the relevance of experience and individual expertise in, say, acting as a



police commander responsible for the policing of a significant area with the attendant resident community, but it is to suggest that the experience and expertise might be informed by knowledge of what works, where, and importantly, how. One of the obstacles to the development of evidence-based policing has been the emphasis within police training regimes on management issues, leadership skills and the law – all of which are obviously important but none of which further the integration of evidence-based crime reduction into the culture of the police.

The What Works in Crime Reduction Programme is ambitious in its aim to change the ways in which policing is delivered. Imagine a police commander

with knowledge of the effective mechanisms that might drive crime down and keep it down. This requires not only familiarity with the law, powers of arrest and criminal justice but also a fundamental understanding of research, science, statistics and the mechanisms through which crime reduction might be achieved in the various contexts that form our complex societies today. It might mean that the local area commander would be overseeing the completion of small scale experiments in his or her area and contributing directly to the training of the new officers coming along behind. Again, the similarity with the ways in which the best teaching hospitals operate is a useful and thought provoking analogy.

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