
ANTICIPATORY BENEFITS IN CRIME PREVENTION

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***Abstract:** This chapter seeks to achieve three things, in decreasing order of importance: (1) To point out the basic phenomenon, i.e., the prematurity of many crime prevention effects relative to the point at which they would occur if they were the product of their presumed mechanism. This is termed anticipatory benefits. (2) To trawl published literature for instances of possible and probable anticipatory benefits. (3) To classify possible reasons for anticipatory benefits and to set out their implications.*

INTRODUCTION

For almost 70 years, social science students have been lectured about events in the bank wiring room of the General Electric Company's factory in Hawthorne, Michigan (see Mayo 1933). In summary, changes in working conditions, duration of rest periods and the like all yielded **increases in productivity, whatever the nature** of the change. Thus, lengthening rest periods increased productivity, as did shortening rest periods. Extra illumination increased productivity, as did less illumination. The active ingredient in the change was not its

specifics, but the attention directed at the employees in the bank wiring room. For present purposes, the precise psychological process involved matters little. It could have been fear of dismissal or pleasure at being the centre of attention, or any combination of these and other reactions. However, the central conclusion remains robust, namely that social processes are complex, and capable of giving rise to substantial unforeseen effects masquerading as the effects of the "real" variables manipulated.

Three points from the Hawthorne study are relevant to crime reduction:

- The manipulation of working conditions took place along lines that should have worked. It makes intuitive sense that better working conditions would improve productivity. In the same way it is clear that street lighting or closed-circuit television (CCTV) should work by increasing surveillability. Plague reduction should work by drowning witches, and fever should be reduced by the extraction of overheated blood. We have been too ready to assume that how crime prevention *should* work is the way crime prevention *does* work.
- It took time in the Hawthorne study to work out that the active ingredient was change itself, not the specifics of the change. In crime reduction, we have scarcely begun to look at matters from that perspective, even though change itself seems a clear means of dissuading offenders from repeatedly targeting the same place or person (Ashton et al., 1998).
- The Hawthorne Effect has typically been characterised as a problem, not a solution. Yet deploying such effects is arguably the most cost-effective crime prevention technique possible.

Seeking to deploy such effects requires some understanding of the mechanisms by which crime reduction achieves its effects (Pawson and Tilley 1997). Ultimately, all crime reduction, with the exception of incapacitating offenders, works by changing a potential offender's or victim's construction of a presenting opportunity. Successful rehabilitation programmes would work by the erstwhile offender ceasing to register a criminal opportunity, or ceasing to regard it as personally relevant. Successful deterrent programmes operate through change in the presumed consequences of acting on a recognised opportunity. Successful opportunity reduction programmes reconfigure environments so that opportunities are removed or are no longer recognised. Opportunity itself does not inhere in the external world. It is a perception, more or less realistic, of circumstances which make an action opportune. Insofar as crime reduction tactics work at all, they work through changes in perception. The centrality of offender per-

ceptions to the effectiveness of situational prevention is well understood, and these form the basis of Clarke and Homel's (1997) classification of 16 opportunity reducing techniques. For example, denying benefits is effective as crime reduction only insofar as a would-be offender is able to learn from experience to construe a presenting situation in a changed way.

If crime control is contingent on the perception of changed circumstances, it may (and frequently does) confer *anticipatory benefits*, as we have chosen to call it. As this chapter goes on to suggest, such anticipatory benefits are not uncommon.

ANTICIPATORY BENEFITS IN THE LITERATURE

How widespread is the phenomenon? The literature was trawled for examples of crime reduction initiatives. These were classified as detailed enough or not detailed enough for anticipatory benefits to be discerned. Criteria for inclusion were that reports were:

- (1) in English;
- (2) published (although unpublished reports submitted to local authorities or funding bodies were included, if a copy could be located);
- (3) included an initiative that had been implemented, permitted some assessment about when it appears to have been initiated, and could be coded using the 16-category SCP technique classification of Clarke and Homel (1997);
- (4) had some measure of crime (even if these were not official police records).

Some 142 pieces of research met the criteria set out above, involving prevention projects at 211 sites.¹

The next step was to classify the research according to whether it was sufficiently detailed to discern anticipatory benefits. A study was deemed detailed enough if four sets of criteria were met. First, the date (or month) when the initiative was implemented must be given. Second, the study must set out time-series data that cover enough of the period prior to the initiative so that factors that might account for anticipatory benefits are included. Third., the time-series data points must be frequent enough to be meaningful given the type of initiative involved and the base rates of the crimes to be prevented. Fourth, it must be possible to separate the effects of the present initiative from previous crime prevention initiatives in the area and from other initiatives being carried out at the same time in the same place. Of the 211 cases reported, 52 met the above criteria. That only one in four evaluation reports allowed consideration of anticipatory benefits

should be remarked. At first blush, it suggests that most evaluation reports are not drafted with issues of effect onset in mind.

The 52 "sufficiently detailed" reports were further classified. *Prima facie* anticipatory benefits were noted if a pre-initiative drop in a crime measure was observed. A study was considered as reflecting "probable" anticipatory benefits if the study noted some factor that could plausibly operate as a mechanism for it, even if the authors themselves did not draw this conclusion. *Prima facie* and probable anticipatory benefits studies differ less in the likelihood of anticipatory benefits as in the prominence and self-consciousness with which explanatory variables to account for it are addressed. Put crudely, if evaluators do not speculate or more rigorously account for anticipatory effects, it makes those effects no less real.

Rather than duplicate lists of references in the body of the chapter and the bibliography, each reference marked:

"+" reports a case that is sufficiently detailed but which shows no evidence of anticipatory benefits;

"++" shows *prima facie* evidence; and

"+++" shows anticipatory benefits for reasons set out in the paper.

Of the 52 cases, 22 showed *prima facie* evidence of an anticipatory effect, of which seven stated reasons for it (or set out enough information for constructing a putative mechanism). Looked at in this way, around 40% of those studies reviewed which were capable of demonstrating anticipatory benefits showed at least *prima facie* evidence of them. Crude as this trawl is, it suggests that anticipatory benefits are not rare phenomena, and that, as a minimum, evaluation studies should contain enough information to allow these effects to show themselves.

Some Examples

In what follows, some sense of what anticipatory benefits look like is provided (see also Table 1).

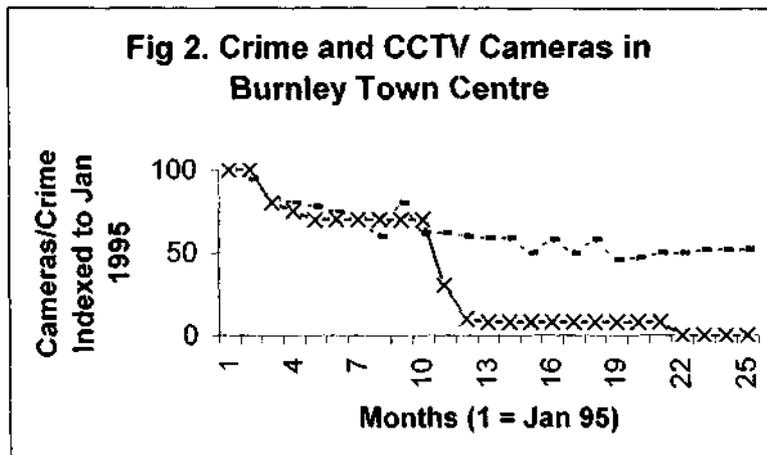
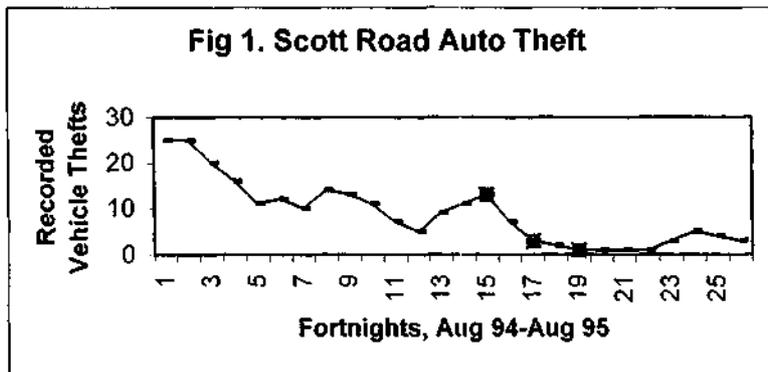
Barclay et al. (1997), studying the effects of security cycle patrols on parking lot crime, showed (Figure 1) that announcing the scheme (at highlighted point 1) was followed by a reduction in crime before foot was ever laid to pedal (at highlighted point 2). Ending the scheme (at highlighted point 3) was not immediately followed by an increase in crime.

**Table 1: Published Evaluations of Crime Prevention Initiatives
with Recorded Anticipatory Benefits**

Study	Location	Intervention	Anticipatory Benefits	Possible Explanation
Armitage et al. (1999)	Burnley, Lancashire, UK	CCTV system	Vehicle crime and other property crime - March 1995	First camera became operational in April 1995. Publicity associated with planned camera installation.
Barclay et al. (1996)	Vancouver, Canada	Bike patrol	Vehicle thefts - late March 1995.	Publicity campaign began March 11, 1995. Bike patrol implemented on April 1, 1995. Offenders unsure when bike patrol began.
Brown (1995)	Newcastle-upon-Tyne, UK	CCTV system	Burglary — Dec. 1992 Criminal damage & Other theft - Jan. 1993	Cameras installed in Nov. 1992. Cameras fully operational in March 1993. Offenders may have thought cameras were working as soon as they were installed.
Poyner et al. (1986)	Pepys Estate, Lewisham, London, UK	Physical improvement and clean-up	Thefts of cars - Oct. 1981 Thefts from cars - July 1982	Consultation on Estate began in Sept. 1981. Action Plan agreed June 1982. Offenders may have altered their offending patterns due to uncertainty over changes to Estate.
Ross (1973)	Great Britain	Legislation on compulsory testing of blood alcohol levels of drivers	Failing to stop after an accident-dropped in 1965, remained stable in 1966 and dropped again in 1967	Proposed legislation on compulsory testing of blood alcohol levels presented in Dec. 1965. Law became effective in Oct. 1967. Drivers may have thought that the law had gone into effect when the legislation was discussed in 1965.

Study	Location	Intervention	Anticipatory Benefits	Possible Explanation
Squires (1998b)	Burgess Hill, Sussex, UK	CCTV system	Criminal damage - Jan. 1997 Shoplifting & All crime - Feb. 1997	CCTV operational April 1997. "All crime" drop attributed to the visibility of the CCTV installation work. Sharp pre-operational drop in shop-lifting attributed to other policing factors (not CCTV).
Tilley and Hopkins (1998)	Belgrave, Leicester, UK	Tailored alarm or detection measurer or security advice	Non-domestic burglary dropped in fourth quarter 1995	Princess Anne announced initiative designed to assist small businesses in third quarter 1995. The initiative began during second quarter 1996. Offenders may have thought initiative began when announced.

This anticipatory effect seems also to be a feature of CCTV schemes. Figure 2 shows such an effect in Burnley (see Armitage et al., 1999). The two lines in that figure represent the proportion of projected cameras not installed (solid line) and the amount of recorded crime (dashed line), both indexed to 100 at the scheme's inception. It will be seen that the bulk of the crime decline coincided with the first few cameras installed, the last 75% being associated with only a trivial further decline. The crime decline anticipated the first camera installation by a month. Similar pre-operational declines appeared in Newcastle-upon-Tyne (Brown, 1995) and Burgess Hill (Squires, 1998b) (see Table 1).



The evaluation of a Home Office burglary reduction programme across many sites shows strong anticipatory benefits (Northern Consortium, 2001).² The Consortium studied 21 burglary reduction initiatives, of which 19 showed reductions. Of this 19, seven showed steep reductions in burglary levels prior to projects being launched.

In the Northern Consortium report (2001) some post hoc suggestions are made about the reasons for the anticipatory decline, (such as a survey of the public that provides police with a fuller understanding of presenting crime problems), but in no case are they exhaustive or made with confidence.

Among other studies, Tilley and Hopkins (1998) showed a crime decline coinciding with the announcement of the initiative in the Belgrave section of Leicester. Poyner et al. (1986) recorded a crime decline following public consultation about crime reduction on the Peeps Estate. Ross (1973) showed a decline in the number of charges of failing to stop after an accident after breath test legislation was discussed in the media.

WHY DO ANTICIPATORY BENEFITS ACCRUE?

What are the possible reasons for anticipatory effects. They include:

- (1) *Effects caused by the smoothing of curves using moving averages.* Such effects would be limited to very short-run anticipations and can be discounted as a major factor;
- (2) *Changes caused by over-recording crime levels* in expectation of gaining funding to reduce the crime levels thus inflated. Such effects should be detectable by contrary changes in events unrelated to the crime of concern (e.g., a decrease in the numbers of criminal damage crimes as those events are "promoted" to attempted burglary);
- (3) *Seasonal effects masking the absence of change;* where an initiative takes effect at the same time as a seasonally predictable decline. This is possible because action is likely at a time when matters are at their worst;
- (4) *Regression effects,* where a place chosen for intervention because it is extreme relative to other places is also extreme relative to itself at other times, and will thus tend to experience declines over time;
- (5) *Creeping implementation,* where some elements of a programme are put in place before an official start date;
- (6) *Preparation-disruption effects,* where surveillance is a by-product of installation of crime-reductive hardware, such as street lighting;

- (7) *Preparation-training effects*, where planning, population surveys, etc. render officers better equipped personally to understand and reduce local crime;
- (8) *Motivation of officers involved to make an initiative a success*, which translates itself into better performance in advance of the initiative itself;
- (9) *Preparation-anticipation effects*, where equipment is deemed by motivated offenders to be operational before it is;
- (10) *Publicity/disinformation effects*, whereby covert measures are presumed to exist as a result of publicity or hearsay.

PUBLICITY/ DISINFORMATION EFFECTS

In the limited scope of this chapter, we should direct our attention to the alternative which, were it true, would have the most profound implications. This is number 10 on the list above, namely the publicity/disinformation alternative. We should be clear that we are not here talking about generalised publicity campaigns, whose effect has typically been found to be meagre (Burrows and Heal 1980; Riley 1980), but of information that the police or other agencies are taking action of specific kinds in circumscribed places.

First, an anecdote illustrates the possible effect (Laycock 2001), discussing the effects of property marking:

...as the year wore on it was clear that the burglary rate was starting to creep up again and I expected it to carry on going to its previous level. I was not therefore best pleased to be told by my then boss that he wanted a second year follow up. I knew what would happen.

But I uncharacteristically did as I was told and in the second year the rate went down even further, but all the reduction was concentrated in the second half of the year. In fact it was almost zero from June. What happened? Well, it was June of the second year before the report of the first year was published. And the fact that crime had gone down was heavily reported in the local and national press. There were TV crews and press interviewers. The project was written up in the Times as a big success. Despite all my careful caveats, property marking was declared "to work." And the burglars read the newspapers and saw the Chief Constable on TV like everyone else.

A study of police decoy vehicles (Sallybanks, 2000) has the unusual feature of deployment of such vehicles in advance of publicity. Figure 3 summarises the results.

It shows that vehicle crime in Stockton, where the initiative ran, was marginally below that elsewhere in the Cleveland force area (April '97-March '98). The drop lines showed where the action and the publicity kicked in respectively. It will be seen that the crime control effect became more marked when publicity alone took place. Taken at face value, this may suggest that publicity about a police initiative is more effective than the substance of the project. This is probably an oversimplification, since the initiative itself (with the communication of arrests effected as part of it) may have sensitised the community to activity, which enhanced the effect of later publicity. Put crudely, the Stockton experience perhaps shows that publicity may be effective only insofar as levels of activity make it plausible.

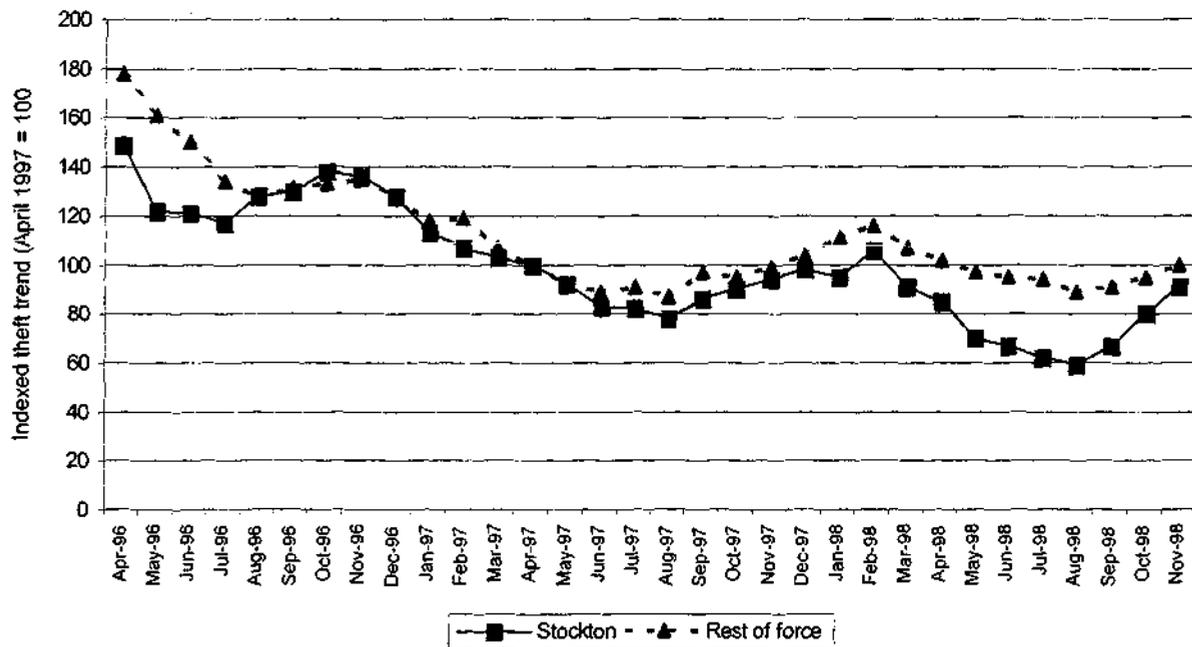
SO WHAT?

The perceptual underpinnings of prevention have been too little reflected in its evaluation. If perception is indeed central, change in crime rates will coincide with changed perception rather than changed practice, when these are not coincident in time. In the typical crime reduction initiative, crimes committed before and after the introduction of a reductive programme has been introduced are summed and contrasted. This approach is almost universally the design to which an evaluator is reduced when the scale of the initiative is limited, since any graphed representation, being based on small numbers of crimes, is erratic. However, as shown above, in those examples where a curve has been calculated, a common sequence is for the crime decline to begin before it becomes possible that it is an effect of the supposed active ingredient. In such cases, the reduction may better be regarded as the result of changes in perception.

We have demonstrated:

- that many crime reduction programmes exhibit effects too early for them to be attributed to the "obvious" active ingredient;
- that the conventional form of before-after analysis brought to bear on crime reduction initiatives serves to disguise such anticipatory effects, which seem to be very widespread;
- that there exists a variety of possible reasons for anticipatory effects; and

Figure 3. The Effects of Decoy Vehicles in Stockton



- that although the design of programmes does not typically allow one to distinguish among the range of possible explanations, some studies appear to have effects driven by publicity/disinformation.

The reader should know that the authors agonised about what to call the phenomenon whereby crime reductive benefits occur "too early." The primary reason for the choice of "anticipatory benefits" is to make explicit the parallel with diffusion of crime control benefits, which refers to:

...the spread of the beneficial influence of an intervention beyond the places which are directly targeted, the individuals who are the subject of control, the crimes which are the focus of intervention or the time periods in which an intervention is brought (Clarke and Weisburd 1994:169).³

The advantage of the chosen term is that the practical implication of anticipatory benefits is identical to that of diffusion of benefits generally, namely:

Recognition of diffusion ... provides an opportunity for maximising crime control benefits. If the processes that lead to diffusion could be identified, crime prevention programmes designed to harness this phenomenon could be more clearly defined (Clarke and Weisburd 1994:169).

The term's disadvantage lies in its lack of neutrality with respect to the presumed mechanism of change. "Anticipatory benefits" fail to call into question the assumption that the initiative whose effects were diffused incorporated the active ingredient in the change. The reader, in accepting the term "anticipatory benefits" should remain aware of its crucial distinguishing characteristic, namely that it *does* call into question the assumed mechanism of change in away that other types of diffusion of benefit do not. To say that a crime prevention initiative lowers crime earlier than it "should" is to say nothing about the mechanism whereby it does this, other than that the realisation of plans was not a necessary condition for crime control. In this respect, anticipatory benefits are far more threatening to settled beliefs about what reduces crime than are other diffusion types.

What should we now do? Insofar as crime reduction can be achieved before one has done anything, how much crime prevention can be achieved without doing anything beyond triggering anticipatory benefits? Answering this question requires a different kind of prevention research, where the active ingredient is explicitly preparation, assertion or publicity. Imagine a campaign asserting that de-

coy cars will be deployed on the basis of their thievability, with illustrations of three vehicles known to be frequently stolen and described as decoy vehicles, with an account of the use of one such car to effect an arrest. An intending car thief would be in an approach-avoidance conflict. He selects a car to steal. In the very act of selecting it, it is defined as a thievable car and therefore one which may be a decoy. Testing the effectiveness of an approach such as this would be a first step. The programme following the success of such an approach would entail work on how far one can stretch the schedule of reinforcement, i.e., how often one could get away with saying decoy vehicles are deployed in relation to actually mounting such operations.

One illustration of how little the police think in terms of disinformation is their use of the word "informant." The word is in principle direction-neutral. It does not say who is being informed about the actions of whom. In practice, the understanding of the word is unidirectional. The informant tells the police what putative offenders are doing. It could be the other way round, telling putative offenders about what the police wish them to think is happening. Similarly the cliché used to describe the work of Neighbourhood Watch is that it forms extra "eyes and ears" for the police. This too depicts the policing enterprise as an information sponge, rather than as a dispenser of information.; This contrasts with espionage, where a more sophisticated, layered approach to the deliberate supply of (dis) information goes along with intelligence gathering.

The underlying ethical question needs to be addressed squarely. This approach involves the police in lying or exaggeration. Whether that is defensible is no doubt a matter for debate. How different it is from disguising the true state of affairs in covert operations is also worthy of discussion. To allow the argument to be developed, the position is taken here that dissembling is here justified in that it presents a closer approximation to a state of affairs to which the public would choose to subscribe. It thus goes along with deceits which exaggerate police strengths covering an area, or levels of usage of forensic investigation.

Effects around a programme's onset should be considered alongside effects around its termination. In the same way that effects antedate onset, so they extend beyond offset. Sherman's (1990) review of police crackdowns suggests, to simplify, periods of quiescence after the crackdown which approximate the crackdown in length. We may speculate that, in the same way as anticipatory effects presume preventive measures to be already in place, residual effects after crackdowns lead people to assume that measures remain in place. We may thus speculate on the perfect, virtually cost-free, crime reduction tactic, in which false information yields anticipatory crime preven-

tion, and reduction is maintained after the fictional initiative would realistically have ended. This post (fictional) crackdown period can be used to consolidate effects achieved.

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NOTES

1. Some studies contained more than one usable comparison.
2. A fuller account of this important work will be published, under authorship of Alex Hirschfield, Kate Bowers and Shane Johnson. These scholars have long been aware of anticipatory diffusion benefits.
3. The temporal diffusion of benefits discussed by Clarke and Weisburd concerns residual effects rather than anticipatory effects. They link this phenomenon with the carryover of the effect of police crackdowns (Sherman, 1990).
4. Of course, this is a simplification. There are examples of the police dispensing information about crime risks (see, for example, Canter, 1998).