Crime Prevention in Parking Facilities

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This paper describes car crime in a small town in England. It goes on to show how the introduction of a situational measure led to a reduction in theft of cars in one of the parking facilities in the town. Problems of implementation and displacement are also briefly considered.

Keywords: Situational crime prevention; parking facilities; parking lots; implementation

Introduction

The traditional approach to the prevention of crime—to see it very much as the responsibility of the police and the criminal justice system—has changed dramatically in the United Kingdom over the past 10 years. It is now generally agreed that everyone has a part to play, from the individual citizen in relation to his or her own behavior, as parents, and members of a community to voluntary and statutory agencies and the world of business and commerce.

Examples of the way in which the private sector can contribute to crime prevention are varied. In the United Kingdom, for instance, the public utility companies have revised their payment collection system to reduce the considerable link with domestic burglary (Hill, 1986; Cooper, 1989). Households where there were payment difficulties were allowed to use fuel on a "prepayment" basis—they put cash into a meter as the fuel was used. These meters were a very attractive target for the domestic burglar since they were only emptied by the fuel suppliers on a quarterly basis and accumulated considerable amounts of cash. Their replacement with meters that take fuel "tokens," purchasable in advance from a local store, has led to a reduction in domestic burglary (Forrester *et al.*, 1990). The automobile manufacturers have been pressed for a number of years to improve the security of vehicles and the recent publication of a "car theft index" (Home Office, 1991) shows that improved security on newer cars is beginning to have an impact; those cars fitted with improved security features as standard at the point of manufacture had a lower risk of theft than virtually the same cars without the added security.

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One of the difficulties associated with pressing for preventive action is that those with the capacity to act—the utility companies, car manufacturers, etc.—may not themselves directly bear the cost of any subsequent offending. For example, the theft of cars is generally covered by insurance and the losses are spread as a consequence. In no way do costs fall back to the manufacturer where the capacity for design change lies, and, indeed, car manufacturers may sometimes benefit indirectly from car crime through increased sales or the purchase of replacement parts. This difficulty is not unique to car theft; it is a common feature of much property crime where insurance coverage is provided (e.g., domestic burglary, theft, robbery) or where losses are borne by commercial companies able to withstand what they may judge as an acceptable degree of loss. It is only when the losses become sufficiently large that action is seen as urgent. This is currently the case in relation to credit card-related crime in the United Kingdom (Levied*al,* 1991) and in the retail trade where, with the recession, profit margins are particularly tight (see, e.g., Burrows, 1991).

A second problem associated with developing preventive initiatives against crime on an agency basis is that many agencies are unclear as to how they should approach the problem. This seems particularly true for local government, although there is evidence that the commercial sector is beginning to take effective preventive measures, some of which have involved cooperation with competitors (Burrows, 1991). Interestingly, Poyner's (1990) account of the way in which car crime was tackled in two parking facilities in the United Kingdom illustrates that effective situational measures can be taken by parking facility managers in relation to auto theft, but also shows the lack of attention given by those same managers to crime. According to Poyner, the security measures were considered a success because they saved in maintenance and repair costs, and the impression was gained that the public was using the facilities more, but prior to his research, there had been no formal attempt to assess the effect on auto theft.

A good deal of effort by central government has been put into encouraging agencies to take a problem-solving approach to crime control. In particular, the retail trade has been encouraged to adopt this approach with a number of publications advocating crime pattern analysis—i.e., a thorough understanding of the problem—as a first step (Ekblom, 1986, 1988; Burrows, 1988, 1991).

A similar effort at the central-government level has not been displayed in relation to car-related crime, although this is now being urgently reviewed. The problem of offending associated with vehicles accounts for approximately 25% of reported crime in the United Kingdom. Auto theft is also extremely expensive (Home Office, 1988) and can have serious consequences—"joyriding," for example, can lead to fatal accidents or injury and has recently been the focus of riotous behavior among young people in the United Kingdom (see, e.g., *The Guardian, Times,* or *Independent,* September 4, 5, and 6, 1991, for accounts).

The need for detailed data analysis as a starting point in tackling car crime—in principle, no different from retail crime—has recently been emphasized by Clarke (1991) who proposed the development of a typology of car crime and discussed the probable preventive options that might then ensue. The present article describes the results of an analysis of car-related offending in a small town, Basingstoke, in southern England. The town was chosen for its relatively high rate of car-related offending. The article describes the approach taken to tackling the problem and the results of an initiative in one of the parking lots in the town.

The Approach

The overall approach, going under the name of situational prevention, is now familiar to many crime prevention workers (Gladstone, 1980; Ekblom, 1988). There are five stages:

- Data collection
- Analysis
- Devising preventive strategies
- Implementation
- Evaluation and monitoring

In slightly amended form, this process is not only applicable to action research of the kind described here but could be seen as no more than good management practice: Define the problem—devise a solution—implement—monitor.

Data Collection/Analysis

The starting point for this study was the concern of the Hampshire Police with the extent of vehicle crime in Basingstoke, a small town in southern England with a population of about 130,000. The study began with an analysis of a sample of the police-recorded car crime for the Basingstoke Subdivision of the Hampshire force in 1983. This showed that 28% of recorded

crime was related to vehicles, amounting to 1427 offenses in the 12-month period studied. Of these offenses, the majority (76%) were associated with cars (as opposed to bicycles, trucks, etc.). Fifty-seven percent of offenses were theft from vehicles; 22%, taking them without the owner's consent; 14%, criminal damage; and 7%, theft of vehicles (the distinction between "taking without consent" and "theft of is drawn by the police and amounts to whether or not the car was returned to the owner or traced within a 28-day period).

A 50% sample of car-related offenses was then taken for more detailed analysis. This exercise was carried out to better understand the nature of car-related crime in the area and to try to identify criminal opportunities that could be blocked. The offenses were found to center on five hotspots—two car parks and three public housing estates—which, together, accounted for 50% of the car crime. Of the five hotspots, the public housing estates accounted for 217/271 (80%) of car-related offending, but, as is often the case in these circumstances, there seemed little to be suggested in the form of practical preventive measures. The problem stemmed from the size of the estates and the fact that many cars were parked some way from the owners' homes in parking areas screened by bushes or fencing. Such remote parking was seen as an attractive design feature, but it meant that cars could be tampered with out of sight, not only of the owner but of passersby as well. The implications for prevention were for the future designers of local authority or private housing estates.

There was an important crime-related difference between the two parking facilities identified as hotspots. In one, 70% of the incidents involved theft from vehicles, whereas in the other, this figure was only 20%. In contrast, in the first parking facility, 25% of the incidents involved theft *of the* vehicle, whereas in the second, this figure was 68%. These differences were related to the way in which the parking facilities were laid out and managed. One was a very large multistory parking garage with a capacity for 2000 vehicles located in the town center and managed by a commercial company. The other was a commuter car park, called Vine Meadow, located close to the station with a capacity for 300 cars and managed by the local government.

The difference in crime patterns stemmed from the fact that in the multistory parking garage (where theft from vehicles was the major problem), egress was controlled by a manned barrier that required the production of a ticket. The Vine Meadow parking lot, which suffered most from theft of cars, relied on a "pay and display" system. This system requires the owner to purchase a ticket at the time of parking and to display it in his or her vehicle. The ticket notes the time at which the car was parked and indicates a maximum parking period. In this way, potential thieves can infer when the owner might be expected to return to the vehicle. Bearing in mind that this was a commuter car park with vehicles left unattended for large parts of the day, it was ripe for criminals looking for a car to steal. The crime analysis confirmed the high-risk period: 94% of offenses occurred on a weekday rather than on Saturday or Sunday and 81% occurred between 6 A.M. and 6 P.M. The layout of the Vine Meadow parking lot is shown diagrammatically in *Figure 1* and illustrates the poor surveillance opportunities.

These differences in the pattern of crime between the two types of parking facilities can be compared with the results reported by Poyner (1991). He found a reduction in the theft of cars from a parking garage following the introduction of security measures but no similar reduction in theft from cars. He suggested that this might be because a car is often needed to steal from cars—tires, gasoline, etc., being taken—and that the thefts from cars in the parking garage were probably carried out by individuals who were in the garage for legitimate reasons, but who could then steal with relative ease using their own cars to transport the stolen goods. This speculation is quite compatible with the patterns of theft observed.

Devising Preventive Strategies

The data analysis described resulted in a presentation to the local government in November 1984, at which a case was made for action in the Vine Meadow parking lot. The parking lot was managed by the local government and it was in a position to be able to implement preventive measures. A number of options were put forward including the installation of CCTV and various types of barrier. Each option was costed, with the most economical turning out to be a manned presence during the high-risk period. To illustrate, card-reading barrier systems cost £30,000-£50,000 (depending on the level of sophistication) compared to £10,000 per annum for two attendants. At the time of the initiative, the central government was running a subsidized employment scheme, which meant that the attendants could be employed at no cost to the town.

Because of the cooperative attitude from the local authority, the limited research resources available were centered on the Vine Meadow parking lot, although

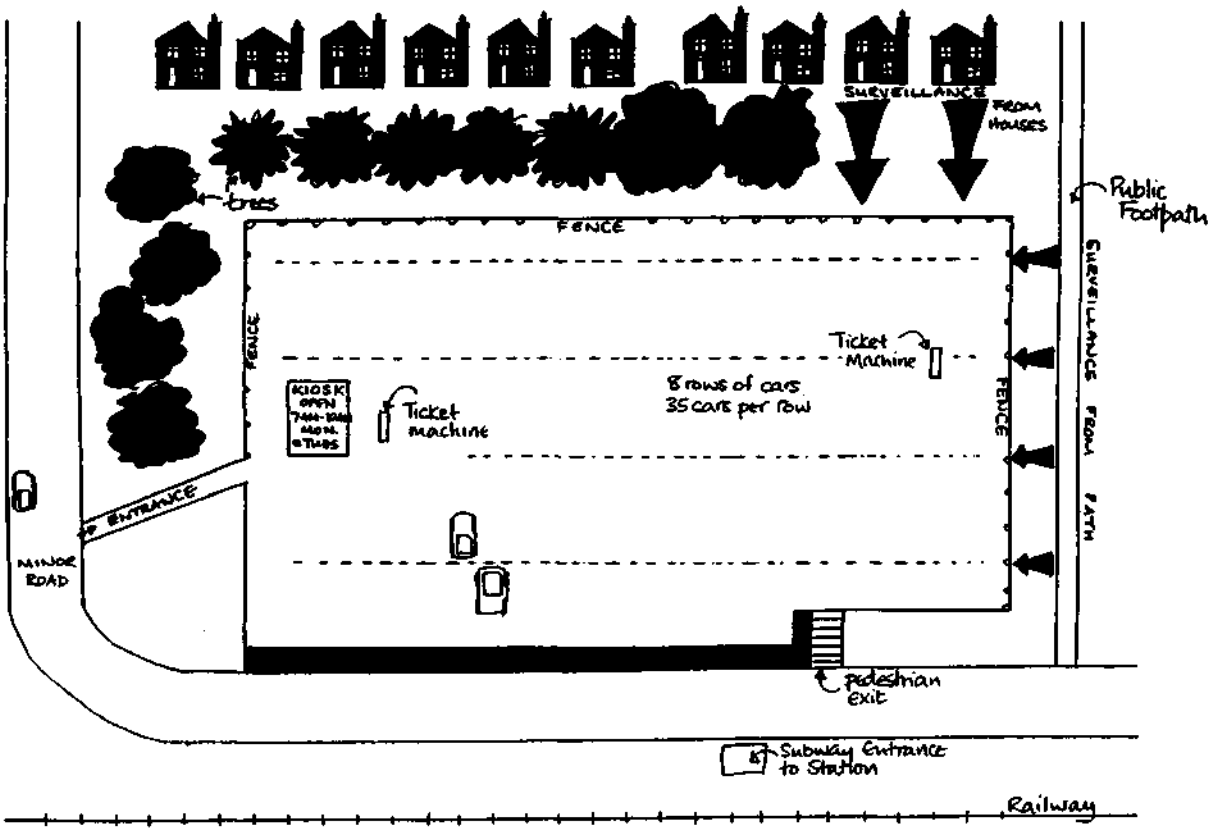

Figure 1. Vyne Meadow Car Park.

contact was also made with the managers of the parking garage. They rented the property from a major United Kingdom insurance company and argued that it was all too difficult to take preventive action. This type of response is not uncommon, particularly, as reported above, when the costs of crime are not borne by the agency with the power to take action.

Implementing the Measures

The implementation phase of a project is frequently prone to problems (Hope and Murphy, 1983; Hope, 1985). This was no less so in Basingstoke, not for lack of goodwill (the local government was, in fact, extremely supportive), but simply because of what seemed a rather cumbersome accounting and committee structure through which everything had to pass. It took over 18 months, until June 1985, before two "crime prevention attendants" were in place in the parking lot covering the high-risk period during the working day.

Monitoring and Evaluation

All offenses during the preimplementation period were recorded for all the major parking facilities in the town. The postimplementation monitoring, also recorded for the same facilities, showed the initiative to have been an apparent success. In the 12 months after the crime prevention attendants were employed, there were 66% fewer offenses than in the 12 months before they took up their posts. Vehicle-related crime in the pre- and postimplementation phase in other parking facilities and in the streets surrounding the Vine Meadow parking lot is shown in *Table 1.*

As can be seen from *Table 1,* there is no significant evidence of displacement. Although crime rose postimplementation at the nearby British Rail Station parking lot and at the parking garage, the increases were not large and have to be seen in the context of rising crime generally. More recent figures show the reduction to have been maintained.

Although the difference in number of incidents at the two car parks is substantial, it does not take ac-

Table 1. Auto Theft at the Experimental and Other Basingstoke Car Parks

Site	12 Months "Pre"	12 Months 'Post"	% Change
Vine Meadow	**38**	**13**	66% decrease
British Rail	**42**	**48**	14% increase
Multistory (including the adjoining Phase II car park)	90	**96**	7% increase
Other central car parks	**18**	**17**	6% decrease
Streets surrounding Vine Meadow	**2**	**4**	Number too small

Table 2. Theft of and from Cars in Vine Meadow Parking Lot and the Multistory Parking Facility

	12-Month Pre-Implementation Period		1990	
	No. Offenses	Risk	No. Offenses	Risk
Vine Meadow	**38**	0.13	19	0.06
Multistory	90	0.05	426	0.21

count of their relative size. The Vine Meadow parking lot holds only about 300 cars, whereas the multistory holds 2000. Taking this into account by expressing the offending in the 12 months prior to the employment of the parking lot attendants and again in 1990 as a proportion of the capacity of each facility gives the risk figures shown in *Table 2.* Comparable figures were not available for the other car parking facilities in the area.

Conclusion

This study illustrates the extent to which crime patterns are a reflection of the opportunity structure. The nature of the offending observed in Basingstoke was crucially related to the way in which parking facilities were laid out and managed. It also provides a further example of the fact that changes in the environment can lead to changes in offending rates, without any significant displacement, insofar as this can be assessed (Barr and Pease, 1990).

The scope for reductions in crime is often dependent on the extent to which crime hotspots can be identified. In this case, five hotspots were responsible for about 50% of the vehicle-related thefts in the town. Two of these, the public housing estates, were too large and the remedial design implications too extensive for immediate action, but it was possible to reduce crime in one particularly high-risk parking lot.

Although this study began with an analysis of *police* crime data, which led, in turn, to the identification of hotspots, there was no reason why significant action could not have been taken by the parking lot or garage managers at a more local level without the police data. As Poyner's (1991) work has shown, car park managers often have sufficient evidence of crime-related problems to justify preventive action. One reason that this does not happen stems from the lack of obvious incentive: The costs of offending are not carried by the facility manager but, ultimately, by the individual victim.

The continued monitoring, as has happened in relation to this study, suggests strongly that there is now a need for attention to be turned to the crime problem at the multistory parking garage in the center of the town. This is now being done by the local police. Measures clearly need to be tailor-made for this facility.

Despite local reductions in crime as described here, the essential problem of auto theft at the national level remains; indeed, the past year has seen an unprecedented rise in theft of and from cars in the United Kingdom (Webb and Laycock, 1992). Although measures to prevent crime locally have increasingly been

shown to be effective, their lack of implementation on a sufficiently large scale to reduce national figures remains as one of the most pressing problems. One possible approach to this might be better training for security managers and others in crime control techniques and improved data sources. The difficulty would remain, however, that it is not until crime levels become sufficiently great as to affect profitability, or unless the social conscience of those in authority can be moved, that action to reduce crime is taken. It is still, in general, cheaper to do nothing.

References

Barr, R. & Pease, K. (1990). Crime placement, displacement and deflection. *Crime and justice: A review of research.* In M. Tonry & N. Morris (Eds.): Chicago: University of Chicago Press.

Burrows, J. (1988). *Retail crime: Prevention through crime analysis.* Crime Prevention Unit Paper No. 11. London: HMSO.

Burrows, J. (1991). *Making crime prevention pay: initiatives from business.* Crime Prevention Unit Paper No. 27. London: HMSO.

Clarke, R. V. (1991). *Preventing vehicle theft: A policy-orientated review of the literature.* Central. Research Unit Papers. Edinburgh: The Scottish Office.

Cooper, B. (1989). Preventing break-ins to prepayment fuel meters. Home Office Research Bulletin No. 26, 34-35. London: HMSO.

Ekblom, P. J. (1986). *The prevention of shop theft: An approach through crime analysis.* Crime Prevention Unit Paper No. 5. London: HMSO.

Ekblom, P. J. (1988). *Preventing robberies at sub-post offices: An evaluation of a security initiative.* Crime Prevention Unit Paper No. 9. London: HMSO.

Forrester, D. (1990). *The Kirkholt Burglary Prevention Project: Phase II.* Crime Prevention Unit Paper No. 23. London: HMSO.

Gladstone, F. (1980). *Co-ordinating crime prevention efforts.* London: Home Office Research and Planning Unit, Information Section.

Hill, N. (1986). *Prepayment coin meters: A target for burglary.* Crime Prevention Unit Paper No. 6. London: HMSO.

Home Office. (1988). *Standing conference working group report on the costs of crime.* London: Home Office Crime Prevention Unit.

Home Office (1991). *The Home Office car theft index.* London: Home Office Crime Prevention Unit.

Hope, T. (1985). *Implementing crime prevention measures.* London: Home Office Research and Planning Unit, Information Section.

Hope, T., & Murphy, D. (1983). Problems of implementing crime prevention: The experience of a demonstration project. *The Howard Journal, 22,* 38-50.

Levi, M. (1991). *The prevention of cheque and credit card fraud.* Crime Prevention Unit Paper No. 26. London: HMSO.

Poyner, B. (1991). Situational crime prevention in two parking facilities. *Security Journal, 2,(2),* 98-101.

Webb, B., & Laycock, G. (1992). *Tackling car crime: The nature and extent of the problem.* Crime Prevention Unit Paper No. 32. London: HMSO.

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