TACKLING CAR CRIME:
the nature and extent of the problem

Barry Webb
Gloria Laycock
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Crime Prevention Unit Papers

The Home Office Crime Prevention Unit was formed in 1983 to promote preventive action against crime. It has a particular responsibility to disseminate information on crime prevention topics. The object of the present series of occasional papers is to present analysis and research material in a way which should help and inform practitioners whose work can help reduce crime.

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Foreword

Car crime is expensive. It costs the victim in terms of inconvenience and higher insurance premiums; it costs the police service and the criminal justice system, and it can lead to serious accidents and death. In the Summer of 1991 we saw disturbances in which the use of stolen vehicles was a central feature.

This report provides a benchmark against which preventive action in relation to car crime can be judged. It describes the growth in offences of theft of and from cars since the beginning of this century and shows how these figures relate to the number of vehicles on the road. In providing a description of car crime as seen by the offenders themselves it illustrates the enormous difficulty we face. Cars are attractive to young people; they are powerful, and they provide the opportunity for excitement and status. All of these elements need to be considered as we formulate plans for tackling car crime. It will be a challenge but this report does provide some hope that the challenge can be met.

I M BURNS
Deputy Under Secretary of State
Home Office
January 1992
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Sergeant Rose
PC Gray
PC Irons
PC Potter
PC Quinton

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Barry Webb
Gloria Laycock

Home Office Crime Prevention Unit
January 1992
# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreword</td>
<td>(iii)</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>(iv)</td>
</tr>
<tr>
<td>List of tables</td>
<td>(vii)</td>
</tr>
<tr>
<td>List of figures</td>
<td>(viii)</td>
</tr>
<tr>
<td><strong>Introduction</strong></td>
<td>1</td>
</tr>
<tr>
<td>This report</td>
<td>3</td>
</tr>
<tr>
<td><strong>Motor vehicle crime 1934-1990</strong></td>
<td>4</td>
</tr>
<tr>
<td>Recording practices</td>
<td>4</td>
</tr>
<tr>
<td><strong>The changing nature of the car crime problem</strong></td>
<td>7</td>
</tr>
<tr>
<td>Theft of vehicles</td>
<td>8</td>
</tr>
<tr>
<td>Theft from vehicles</td>
<td>15</td>
</tr>
<tr>
<td>Summary</td>
<td>17</td>
</tr>
<tr>
<td><strong>What the offenders say</strong></td>
<td>19</td>
</tr>
<tr>
<td>Which cars are most attractive to thieves?</td>
<td>19</td>
</tr>
<tr>
<td>How do thieves enter cars and start them?</td>
<td>20</td>
</tr>
<tr>
<td>Why are cars and their contents stolen?</td>
<td>20</td>
</tr>
<tr>
<td>Where are cars taken from?</td>
<td>22</td>
</tr>
<tr>
<td>Alarms</td>
<td>22</td>
</tr>
<tr>
<td>What offenders say about their driving</td>
<td>22</td>
</tr>
<tr>
<td>What might have prevented thieves from taking or stealing from cars at all?</td>
<td>23</td>
</tr>
<tr>
<td>How old are first offenders?</td>
<td>23</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Summary: implications for prevention</td>
<td>25</td>
</tr>
<tr>
<td>References</td>
<td>27</td>
</tr>
<tr>
<td>Crime Prevention Unit Papers</td>
<td>30</td>
</tr>
</tbody>
</table>
List of tables

<table>
<thead>
<tr>
<th>Table No.</th>
<th>Caption</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Notifiable offences to motor vehicles recorded by the police, 1940-1990</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>Vehicle crime rate per 100,000 inhabitants in the Federal Republic of Germany and in England &amp; Wales, 1987</td>
<td>14</td>
</tr>
<tr>
<td>3</td>
<td>The proportion of cars found with an unlocked door or boot, or an open window</td>
<td>15</td>
</tr>
<tr>
<td>4</td>
<td>Theft from vehicles: the scale of growth</td>
<td>16</td>
</tr>
<tr>
<td>5</td>
<td>Property stolen from vehicles in six police forces</td>
<td>17</td>
</tr>
<tr>
<td>6</td>
<td>Property stolen from vehicles in London</td>
<td>17</td>
</tr>
<tr>
<td>7</td>
<td>Was taking/stealing from vehicles planned or unplanned?</td>
<td>21</td>
</tr>
<tr>
<td>8</td>
<td>What might have stopped you from getting into car crime in the first place?</td>
<td>23</td>
</tr>
<tr>
<td>9</td>
<td>How old were you when you first took and drove a motor vehicle?</td>
<td>23</td>
</tr>
</tbody>
</table>
# List of figures

<table>
<thead>
<tr>
<th>Figure No.</th>
<th>Caption</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Number of private cars and vans licensed in Great Britain, 1930-1990</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Number of notifiable motor vehicle crimes in England &amp; Wales per 1,000 vehicles licensed Great Britain, 1934-1990</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Number of notifiable motor vehicle crimes in England &amp; Wales per 1,000 vehicles licensed in Great Britain, 1970-1990</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>Motor vehicle crime as a percentage of all recorded crime in England &amp; Wales, 1970-1990</td>
<td>8</td>
</tr>
<tr>
<td>5</td>
<td>The problem of theft of vehicles, 1990</td>
<td>9</td>
</tr>
<tr>
<td>6</td>
<td>Number of thefts/unauthorised takings of motor vehicles in England &amp; Wales per 1,000 vehicles licensed in Great Britain, 1970-1990</td>
<td>10</td>
</tr>
<tr>
<td>7</td>
<td>Number of thefts and unauthorised takings of motor vehicles in the Metropolitan Police District per 1,000 vehicles licensed in Greater London, 1970-1990</td>
<td>11</td>
</tr>
</tbody>
</table>
Introduction

In 1920, only fifteen years after Herbert Austin began manufacturing cars in Birmingham, the first signs of a growing problem of car crime were appearing. The Commissioner of the Metropolitan Police reported the following:

“Amongst other crimes, larcenies of motor-cars and vans have been frequent. These, again, are in a large measure due to the carelessness of owners. The best remedy in this case is an improvement in the system of registration which might be so arranged as to make the disposal of a stolen car extremely difficult”. (Report of the Commissioner of Police of the Metropolis for the years 1918 & 1919, p.12).

The careless and negligent behaviour referred to in this and subsequent reports of the period meant drivers who left their vehicles unattended in the street. In these early days of the motor car, car security was virtually non-existent and not particularly encouraged. For example in 1928 the Minister of Transport passed an order making it illegal for drivers in London to lock their cars when parked in public places (The London Traffic (Parking Places) Regulations, 1928). The rapid growth in car ownership together with the lack of any properly developed public car parking arrangements in London meant that obstructions caused by parked cars were a serious problem, and it had to be possible to move cars by hand in the absence of their owners.

In 1932 the order against the locking of cars in London was withdrawn, and attention began to turn to the question of car security, especially since improvements in the registration of vehicles had not brought about the expected reduction in thefts of cars. Drivers were now encouraged to lock their cars, with efforts made in London to publicise the fact that this was no longer illegal. The vulnerability of particular car designs was also beginning to be recognised. For example, the Metropolitan Police Commissioner noted that touring cars, with their very open style, could not be adequately secured with door locks. It was suggested that car manufacturers might design some standard device that would fit all cars to prevent them from being stolen.

It was not until 1949 that Chrysler pioneered the modern key-operated starter, a development that was quickly adopted by other manufacturers to replace the old push-button device. Twenty years later, in 1969, legislation was introduced in this country requiring all new cars to be fitted with steering column locks. By this time the number of cars on the road had increased enormously (see figure 1).
Public concern about car crime led to a great deal of activity in the 1980s. Two working groups on car security and car crime were set up for the Home Office Standing Conference on Crime Prevention (Home Office 1985; Home Office, 1986; Home Office 1988). The Home Office published a more technical report examining car security devices (Southall & Ekblom, 1985). In 1986, car crime became an agenda item at the then Prime Minister’s seminar on crime prevention. It was agreed there that the British Standards Institution (BSI) and the motor manufacturers would produce a performance-based standard and that the Department of Transport would seek to have this adopted as an EC Directive. The first part of this standard (BS AU 209) dealt with mechanical locking systems, and was published in 1986 (BSI, 1986a). Subsequent parts covered the security of in-car entertainment equipment (BSI, 1988a), window etching (BSI, 1988b), central power locking (BSI, 1988c), and deadlocking (BSI, 1988d). Another standard (BS 6803) dealt with vehicle alarms (BSI, 1986b; 1987; 1990).

In 1990, thefts of and from cars increased by 24% over the previous year, making up 28% of all recorded crime. This prompted renewed efforts by the Government to persuade manufacturers to improve car security, and owners to take more care in securing their vehicles and removing valuables from them.
Effective crime prevention requires detailed definition of problems in order to design and target appropriate strategies. The purpose of this paper is to establish as much as is possible the current nature of the car crime problem, and how it has changed over the years. Car crime is a term that covers a wide variety of behaviours and problems, as this paper will show. Drawing on information from routinely collected statistics, research studies, and surveys this report attempts to develop as thorough an understanding of the car crime problem as possible, thus identifying those areas where action might best be focused to have the greatest impact.
Motor vehicle crime 1934-1990

In 1934, thefts of and from motor vehicles appeared for the first time as separate figures in the Home Office statistics on indictable offences known to the police. Previously, these figures had been included in the more general category of simple larceny. Table 1 shows the number of thefts of and from vehicles over the past 50 years, in ten year intervals. These figures include crime to all motor vehicles, such as motor cycles and commercial vehicles as well as cars.

Table 1. Notifiable offences to motor vehicles recorded by the police, 1940-1990

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Theft from vehicles</td>
<td>16,849</td>
<td>33,156</td>
<td>92,704</td>
<td>175,415</td>
<td>294,948</td>
<td>772,900</td>
</tr>
<tr>
<td>Theft/unauthorised taking of vehicles</td>
<td>1,716</td>
<td>6,192</td>
<td>16,840</td>
<td>147,632</td>
<td>324,354</td>
<td>494,000</td>
</tr>
</tbody>
</table>

Numerically, both forms of motor vehicle crime show large and persistent increases throughout this period, with recorded figures often doubling or even trebling every decade. However, figure 1 has shown that the number of cars on the road also increased enormously in this period. The risk of becoming a victim of car crime may not, therefore, have increased to the extent suggested by these figures (see Mayhew, 1990 for discussion). Figure 2 shows the number of thefts of and from vehicles per 1,000 vehicles on the road 1934-1990.

Figure 2 shows some alarming increases in the rate of theft of and from vehicles in the last 20 years. Prior to this, both forms of crime appear to have been comparatively stable phenomena. The growth in vehicle crime for the first 30 years of records was largely in line with the growing number of cars on the road. The risk per car did not increase to nearly the same extent as it seems to have done since the late 1960s.

Recording practices

One of the reasons for the much greater amount of recorded vehicle theft since 1968 compared with previous years is a change in the practice for recording unauthorised takings of vehicles. The Home Office has for many years struggled with the problem of how to deal with incidents where vehicles are taken without...
the owner’s permission for a short period, and recovered soon afterwards. It is difficult to bring a charge of theft in such cases since the intention appears to have been to ‘borrow’ the car, rather than permanently deprive the owner of it. An early response to the problem was Section 28 of the Road Traffic Act 1930 which introduced the offence of taking a vehicle without the owner’s consent. If a stolen vehicle was recovered within 48 hours, it was to be recorded as an unauthorised taking, and not a theft. The time period for recovery of the vehicle was extended in 1960 to one calendar month.

Figure 2. Number of notifiable motor vehicle crimes in England & Wales per 1,000 vehicles licensed in Great Britain, 1934-1990

Department of Transport, Transport Statistics Great Britain. London: HMSO

Notes
No data available on number of licensed vehicles in 1977.

Until 1968, the unauthorised taking of a vehicle was a summary offence, and such incidents were therefore not included in the criminal statistics. Section 12 of the Theft Act, 1968 changed this by stipulating that the unauthorised taking of a motor vehicle was now to be recorded as a notifiable offence, and to be included in statistical returns to the Home Office. These figures were not provided separately, but were combined with thefts of vehicles in a single figure. The effect of this can be seen very clearly in figure 2, when 107,024 incidents of unauthorised taking were taken into the criminal statistics for the first time in 1968.
There have also been changes affecting the recording of theft from vehicles. Prior to 1980, an unauthorised taking of a motor vehicle where the vehicle was recovered with property missing was recorded as the more serious offence of theft from a motor vehicle. The Home Office counting rules of 1980 stated that such incidents were now to be recorded as unauthorised takings, unless it was clear that the vehicle had been taken primarily for the purpose of stealing property from it. Also, from 1969 thefts from vehicles of property worth less than £5 were excluded from the records. The effect of both these changes would have been to reduce the number of recorded thefts from vehicles. Unlike theft of cars, the large increases in thefts from vehicles appear to have taken place in spite of, rather than because of, changes in recording practice.
The changing nature of the car crime problem

Figure 3 shows the number of reported thefts/unauthorised takings of vehicles and thefts from vehicles per 1,000 licensed vehicles since 1970. Although these figures include all motor vehicles, cars are the target in the majority of incidents (Poyner & Webb, 1991).

**Figure 3. Number of notifiable motor vehicle crimes in England & Wales per 1,000 vehicles licensed in Great Britain, 1979-1990**

Up until 1980, both forms of theft followed each other very closely, each being recorded in similar numbers and steadily increasing throughout the 1970s at similar rates. In 1980 there was a fundamental change in this pattern. Thefts from vehicles began to outstrip thefts/unauthorised takings of vehicles, growing at a much accelerated rate over the following ten years. In that period, the risk per 1,000 vehicles on the road doubled from 17 thefts to 34. In contrast, the rate of theft of
vehicles has been comparatively stable over the past ten years. Although numerically these thefts have increased, this has been largely in line with the increase in number of cars on the road.

The divergence between these two forms of vehicle crime is shown more clearly in figure 4. As a proportion of all recorded offences, thefts and unauthorised takings of vehicles has been steadily reducing since 1978, while theft from vehicles has been increasing. Theft from vehicles has become a prolific problem, with a growing proportion of all recorded crime involving stealing from vehicles.

Figure 4. Motor vehicle crime as a percentage of all recorded crime in England & Wales, 1970-1990


Theft of vehicles

It is recognised that the crime statistics for thefts/unauthorised takings are made up of a number of quite distinct types of crime. Clarke (1991) has classified these as follows.

Theft of vehicles for casual use

This is taking a vehicle for temporary, personal use. It includes the much publicised activity of ‘joy-riding’, as well as taking a car to get home at night because the last
train has gone, or using it in carrying out another crime. The vehicle is not stolen for financial gain, but is ‘dumped’ when the thief has finished with it.

**Professional theft**

The intention here is to deprive the owner of the vehicle permanently, for financial gain through re-selling the vehicle or parts of it. Some very sophisticated techniques may be used to change the vehicle’s identity, and valuable and rare cars may even be exported. Older cars may be stolen to be sold to breakers’ yards for their scrap value or for spare parts.

**Insurance fraud**

This occurs when the car owner reports and claims for the theft of his vehicle that he has disposed of himself. He may have arranged for someone else to take the car or he may have sold it direct to a scrap dealer. This is most likely to involve older and less valuable cars, where the owner stands to gain more from an insurance claim than from a legitimate sale of the vehicle.

Crime statistics do not distinguish these problems. Although the separate offences of unauthorised taking and theft of a vehicle do recognise that some thefts are for temporary personal use and others for financial gain, the numbers of each are amalgamated both in the national and in most police force statistics to produce a single figure. It is possible, however, to estimate the scale of each of these problems using other sources of data.

**Figure 5. The problem of theft of vehicles, 1990**

- Theft for temporary personal use (eg “Joy-riding”) - 65%
- Insurance fraud – 8%
- “Professional” theft (for financial gain) - 27%
The Home Office maintains annual figures showing the number of stolen vehicles in England & Wales which have been recovered by the end of the year, and these can be used to estimate the number of thefts for temporary use. Insurance fraud is much more difficult to assess. Richards & Warman (1991) report the view of vehicle insurers that 15% of claims for theft of vehicles are fraudulent. Searching for more objective evidence, Richards & Warman argue that older vehicles which are reported as stolen and never recovered may reflect insurance fraud. In 1990, 25% of all outstanding vehicles on the Police National Computer were ten years or more old when stolen. On the basis of this information, figure 5 described the nature of car theft in 1990.

There is evidence to suggest that the problem of vehicle theft is increasingly one involving permanent loss of the vehicle. Using the Home Office figures on recovery rates, figure 6 shows the number of vehicles reported stolen per 1,000 vehicles on the road which were subsequently recovered and unrecovered between 1970-1990.

Figure 6. Number of thefts/unauthorised takings of motor vehicles in England & Wales per 1,000 vehicles licensed in Great Britain, 1970-1990


Notes
1. No comparable data available on number of recovered vehicles in 1974
2. No data available on number of licensed vehicles in 1977.
Figure 6 strongly suggests that theft of vehicles for temporary use, whether for 'joy-riding' or other activities, is becoming a much less dominant feature of the vehicle theft statistics nationally. In 1970, 89% of stolen vehicles were recovered. By 1990 this had reduced to 66%. The greater area appears to be theft for financial gain, whether by genuine theft or insurance fraud.

The pattern of recovery rate between 1970-1990 varies between police forces, with some forces showing little change over this period. The force which shows the greatest change is the Metropolitan Police. The Metropolitan Police are one of the few forces who have maintained and published separate figures for unauthorised taking and theft of motor vehicles since 1968. It is therefore possible to compare these two offences in London. Figure 7 shows the crime patterns between 1970-1990.

Figure 7. Number of thefts and unauthorised takings of motor vehicles in the Metropolitan Police District per 1,000 vehicles licensed in Greater London, 1970-1990

Sources: Report of the Commissioner of the Police of the Metropolis. London: HMSO.
Department of Transport, Transport Statistics Great Britain. London: HMSO.

Notes
Prior to 1980, some incidents where stolen vehicles were recovered with property missing may have been classified as theft from a vehicle. After 1980, all thefts of vehicles are classified as either theft of or unauthorised taking. Figures for unauthorised taking before 1980 are therefore underestimated in comparison with those after 1980.
Figure 7 shows large increases in unauthorised taking of motor vehicles in London during the 1970s. However, this problem has reduced dramatically and consistently from 1980 onwards, not only in terms of risk per 1,000 vehicles on the road but also numerically. In 1980, 63,906 incidents of unauthorised taking were recorded by the Metropolitan Police. By 1990 this had reduced by 39% to 38,943. The risk of a vehicle being stolen and permanently lost, however, has continued to grow steadily throughout this period.

One possible explanation for the patterns shown in figures 6 and 7 is that the police are becoming less efficient in recovering abandoned stolen vehicles within 30 days, and that incidents which would previously have been classified as unauthorised taking are increasingly going into the theft figures. Unfortunately, there are no readily available data which could be used to examine this, and so there remains the possibility that figures 6 and 7 reflect, at least in part, changes in recording practice. However, there are a number of points to note about the data in figures 6 and 7 which suggest otherwise.

If the reduction in unauthorised taking shown in figure 7 was mainly due to a recording artefact of this kind, one might expect to see a much steeper rise in thefts of vehicles after 1980 than before, when unauthorised takings began to drop sharply. This is not shown, and figure 7 even shows small reductions in the risk of both offences between 1987-1989. The data shown in figure 6 is based on returns to the Home Office from police forces of stolen vehicles recovered at any time in the year in question. These figures are therefore less affected by any recording change of the kind described above.

A more likely explanation may be that increased car security, perhaps combined with increased traffic congestion particularly in London, has deterred the less determined car thief.

**Steering column locks**

In 1971, an agreement was negotiated between the Home Office and the Society of Motor Manufacturers and Traders that resulted in all new cars manufactured in or imported to England & Wales being fitted with steering column locks as standard. The effect of this on theft/unauthorised taking of vehicles in London was examined by Home Office researchers (Mayhew, Clarke & Hough, 1976). They found that steering column locks had substantially reduced the risk of new cars being stolen, but that thieves seemed to have redirected their attention to older cars not so protected. Consequently, there was no noticeable effect on car theft overall.

Mayhew and her colleagues predicted that thefts, particularly unauthorised takings of vehicles would reduce as the proportion of all cars on the road fitted with steering column locks increased. In 1973, only 37% of cars in London were fitted with steering locks so there were plenty of unprotected targets available. However, it was estimated that by 1980, about 81% of all cars in London would be fitted with steering column locks, and at this point the more casual thefts of cars should show signs of reducing.
Figures 6 and 7 seem to bear out this prediction, with unauthorised takings reducing in London from 1980 onwards and temporary vehicle theft nationally levelling off at this point. The conclusion that this is a delayed effect of the 1969 legislation is further supported by data from Germany.

Steering column locks were introduced in Germany ten years earlier than in this country, and all cars were required to be fitted with them. This policy produced a much quicker result, with thefts/unauthorised takings of vehicles in the Federal Republic reducing by 62% in the first year in which the total car population was protected (Mayhew, Clarke & Hough, 1976). A more complete picture of the effect on car theft is now possible 20 years on. Figure 8 shows the total number of reported thefts/unauthorised takings of vehicles and thefts from vehicles in the Federal Republic of Germany, 1958-1990.

Figure 8. Motor vehicle crime in the Federal Republic of Germany, 1958-1990


Notes
1. These figures do not include ‘two-wheeled’ vehicles such as mopeds and motor cycles.
2. The German crime statistics distinguish thefts from the interior of vehicles (’Diebstahl in/aus Kraftfahrzeugen’) and thefts from the exterior of vehicles (’Diebstahl an Kraftfahrzeugen’). The data shown in figure 8 are thefts from the inside of vehicles only.
The immediate effect of protecting all cars with steering column locks can be seen from figure 8. However, perhaps the most striking aspect of this graph is the astronomical growth in theft from vehicles since then. This compares with the growth in theft from vehicles in this country shown in figure 2, although the German data show a peak in 1987 while figures for England & Wales have continued to rise. Nevertheless, the number of thefts from vehicles per 100,000 inhabitants in 1990 is very similar in both countries as table 2 shows.

<table>
<thead>
<tr>
<th>Table 2. Vehicle crime rate per 100,000 inhabitants in the Federal Republic of Germany and in England &amp; Wales, 1990</th>
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<tbody>
<tr>
<td><strong>Federal Republic of Germany</strong></td>
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<tr>
<td>Theft from vehicles*</td>
</tr>
<tr>
<td>Theft/unauthorised taking of vehicles</td>
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</tbody>
</table>

*The Bundeskriminalamt publishes separate statistics for thefts from the interior of vehicles and thefts from the exterior of vehicles. The two figures for 1990 (652,466 and 127,718 respectively) have been added here to produce data comparable to those published by the Home Office for thefts from vehicles.

Clearly, Germany has its fair share of car criminals and it seems reasonable to suggest that, had it not been for the steering column locks policy, car theft in Germany would have continued to increase in similar proportion to theft from vehicles, as it did in this country up to 1979 (see figure 2). Steering column locks appear to have contributed very considerably to the control of vehicle theft in Germany, providing strong support for the conclusion that the stabilisation of vehicle theft in this country in the last ten years is a consequence, at least in part, of a critical proportion of all cars being protected by such locks.

Door and window security

A number of studies have been carried out over the last 20 years to check the security of parked cars, by physically trying the doors and boots and noting any open windows. The most recent study shows a considerable improvement in the proportion of cars left with either an unlocked door or open window. In 1977 and 1979, researchers and police officers checked a total of 4,000 and 25,000 vehicles respectively (Burrows & Heal, 1979; Riley & Mayhew, 1980). Burrows & Heal also report the results of checks carried out in 1971 by police officers in six forces. In January 1992, a team of Home Office researchers and officers from the British Transport Police checked the security of 2,495 cars parked in car parks attached to London Underground stations on the north end of the Northern and Piccadilly lines, and the east end of the Central line. The results of these four studies is summarised in table 3.
Table 3. The proportion of cars found with an unlocked door or boot, or an open window

<table>
<thead>
<tr>
<th>Year</th>
<th>1971</th>
<th>1977</th>
<th>1979</th>
<th>1992</th>
</tr>
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<tr>
<td></td>
<td>22%</td>
<td>20%</td>
<td>16%</td>
<td>4%</td>
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The most common point of insecurity in the 1992 study was the boot or hatch, unlocked in 46% of insecure vehicles. The second most common location was the front passenger door, unlocked in 21% of insecure cars. Only 9 drivers doors were found unlocked. 19% of unlocked doors had broken locking mechanisms.

The level of insecurity found in the 1992 study is considerably less than that found in the 1971, 1977 and 1979 studies. It is possible that this is at least partly due to a difference in location of the various studies. The 1977 study was carried out in Plymouth city-centre streets and car parks, and the 1979 checks were made on cars parked in suburban streets in the north of England and West Midlands. The 1992 work focused on commuter car parks, and it may be that drivers take more care to lock their vehicles in these locations because they know the car will be left there all day. However, the 1992 study took place during the day while the earlier studies were carried out in the evening or at night when it might be expected that owners would take more care to lock their cars. The data do not reflect seasonal variations. The 1977, 1979, and 1992 studies were all conducted in the winter period, between the months of November and March. The 1971 checks were conducted in April. The 1992 data does seem to show either that drivers are now taking greater care to secure their vehicles properly or possibly the effect of central door locking systems and improvements in boot locking mechanisms. Many boots are now spring-loaded and key, rather than push-button and key operated, and lock automatically when closed.

Traffic congestion

Car density has also increased enormously over the last 20 years, and road and parking conditions in 1990 were quite different from those in 1970. Tight parking and congested roads provide a daunting environment for even legitimate drivers, and may make the process of surreptitiously taking and driving a car away more difficult.

Theft from vehicles

Theft from vehicles has grown at a much accelerated rate during the 1980s to become one of the most common crimes in the country. Table 4 below summarises the evidence showing the scale of growth of theft from vehicles in the last ten years.
Table 4. Theft from vehicles: the scale of growth

<table>
<thead>
<tr>
<th></th>
<th>1980</th>
<th>1990</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number recorded in England &amp; Wales</td>
<td>294,948</td>
<td>772,900 (+162%)</td>
</tr>
<tr>
<td>Rate per 1,000 vehicles on the road in England &amp; Wales</td>
<td>17</td>
<td>34</td>
</tr>
<tr>
<td>As a proportion of all car crime</td>
<td>48%</td>
<td>61%</td>
</tr>
<tr>
<td>As a proportion of all recorded crime</td>
<td>11%</td>
<td>17%</td>
</tr>
</tbody>
</table>

Increased reporting

One possible explanation for the very dramatic growth in recorded thefts from vehicles is that more is now being reported to the police. According to the British Crime Survey, 30% of victims of such theft reported it to the police in 1981. In 1987, this figure had risen to nearly 40% (Mayhew, Elliott, & Dowds, 1989). Clearly, thefts from vehicles are considerably under-reported, and it does seem likely that at least some of the increase in recorded thefts is due to increased reporting. However, the level of increase in reporting shown by the British Crime Survey is insufficient to account for the 73% increase in recorded incidents between 1981-1987.

Radio/cassettes

Theft from motor vehicles includes a variety of behaviour such as syphoning petrol from fuel tanks, removing car batteries, wheels, and other external components, as well as stealing property from inside cars. Theft of in-car entertainment equipment appears to be one of the most common problems. In an unpublished questionnaire survey of a sample of car crime offenders in Manchester in 1990, Smyth found that 77% said that they would break into a car to steal the radio/cassette. A recent analysis of all car crime reported in a one week period in 1991 to the six police Forces in the ACPO Eastern Region found that in-car entertainment equipment was taken in between a quarter and nearly half of all thefts from motor vehicles. Table 5 shows the figures.

Vauxhall claim to be one of the first manufacturers to provide radio/cassettes as a standard feature in a mass market car (the Cavalier) in this country, in 1981. Prior to this, radios and radio/cassettes tended to be fitted only in more ‘up-market’ cars such as the Ford Granada, or as an optional extra. Since the early 1980s, the practice of including a radio/cassette as standard has been adopted by most car manufacturers, and has cascaded down through the model ranges. In 1990, most new cars were fitted with a radio/cassette.
Table 5. Property stolen from cars in six police forces

<table>
<thead>
<tr>
<th></th>
<th>Nottinghamshire</th>
<th>Cambridgeshire</th>
<th>Lincolnshire</th>
<th>Derbyshire</th>
<th>Norfolk</th>
<th>Suffolk</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-Car entertainment</td>
<td>47</td>
<td>24</td>
<td>37</td>
<td>40</td>
<td>27</td>
<td>26</td>
</tr>
<tr>
<td>Other vehicle parts</td>
<td>14</td>
<td>21</td>
<td>23</td>
<td>16</td>
<td>10</td>
<td>36</td>
</tr>
<tr>
<td>Luggage</td>
<td>7</td>
<td>7</td>
<td>3</td>
<td>2</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>Cash/cheques</td>
<td>8</td>
<td>7</td>
<td>6</td>
<td>6</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Clothing</td>
<td>8</td>
<td>7</td>
<td>5</td>
<td>8</td>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>Sports equipment</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
<td>30</td>
<td>25</td>
<td>25</td>
<td>32</td>
<td>13</td>
</tr>
</tbody>
</table>

|         | 99% | 99% | 100% | 100% | 100% | 100% |

There is some evidence that the increased presence and attractiveness of in-car entertainment equipment has fuelled the increase in thefts from vehicles during the 1980s. Table 6 compares thefts of vehicle accessories and parts (the category that includes radio/cassettes) with thefts of other property from vehicles in London in 1980 and 1990. It shows that thefts of vehicle accessories and parts have increased very much more than thefts of other property in this period.

Table 6. Property stolen from vehicles in London

<table>
<thead>
<tr>
<th></th>
<th>1980</th>
<th>1990</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theft where vehicle accessories and parts were the main items taken</td>
<td>35,825</td>
<td>87,234</td>
<td>+143%</td>
</tr>
<tr>
<td>Other thefts</td>
<td>33,208</td>
<td>48,213</td>
<td>+43%</td>
</tr>
</tbody>
</table>

Summary

The nature of the car crime problem has changed over the course of the last ten years. The risk of a vehicle being stolen for temporary personal use, whether for 'joy-riding' or for other purposes, appears to have been diminishing, or at least stabilised since 1980. The most likely explanation for this is that improvements
in car security have deterred the less determined car thief. Most cars on the road now have steering column locks which are automatically engaged on withdrawing the ignition keys, and there is strong evidence from this country and from Germany that this is an effective measure against more casual car theft. Although part two of this paper shows the apparent ease with which steering column locks are overcome, it is also clear that stealing a car requires the use of tools such as a screwdriver or scaffolding bar and some advance planning.

The proportion of parked cars left with an unlocked door or open window has also considerably reduced in the last ten years. This may be the result of technological advances such as central locking and electronically operated windows as much as any conscious change in behaviour by drivers. While this improvement in indoor and window security has had little noticeable effect on thefts from vehicles, it does seem possible that some car thieves would be deterred by the thought of having to drive a stolen car with a smashed window – not to mention the discomfort.

These improvements in car security have not reduced the more determined car theft for financial gain which continues to grow at a steady and consistent rate. Neither has it reduced thefts from vehicles, which have grown dramatically in the last ten years to become a serious problem, not only in this country but also in Germany. This seems to have been stimulated largely by the increased availability and attractiveness of in-car entertainment equipment. It is also possible that some offenders have diverted their attention from taking vehicles to stealing from stationary vehicles. It is known that ‘joy-riding’ is often motivated in part by the opportunity for financial gain, by stealing parts and property from the car before dumping it (eg Spencer, 1991). Increased car immobilisation provided by steering column locks together with greater availability and attractiveness of in-car entertainment create the conditions for such a change of behaviour.
What the offenders say

A number of questionnaire and interview research studies have recently been carried out specifically on car crime offenders. These studies typically focus on details of particular crimes committed by the offenders, for example asking about what was stolen and how. Some also attempt a more in-depth analysis of their motivation and career in car crime.

Published work on the views or motivation of car crime offenders are relatively rare. McCullough, Schmidt, & Lockhart (1990) provide an example in their vivid description of ‘joy-riding’ in Belfast. Spencer (1991) also provides an insight into the careers and perceptions of car crime offenders in Sunderland. The Probation Service is an obvious source of information in this area (Laycock and Pease, 1985; Geraghty, 1991) and recently staff in two probation areas – Greater Manchester and Northumbria - have carried out car crime surveys of offenders in their charge (Smyth, 1990; Gulliver, 1991). Surveys of car crime offenders have also been carried to inform local motor vehicle projects (Gow & Peggrem, 1991; Briggs, 1991).

The Greater Manchester study reports survey results from 86 car crime offenders completed in January and February 1990. The work was carried out as part of the Greater Manchester Police/Probation Car Crime Campaign launched on 1 March 1990. All those involved in the survey were male with over half under 20 years of age. In the Northumbria study, all 56 offenders were referred to Gulliver by probation colleagues in the area for the preparation of Social Inquiry Reports (SIRs). The offenders were all considered to be ‘car crime specialists’. Again they were all male with 70% aged under 20. Both surveys obtained information on theft of and from cars and in both the majority of offenders had considerable experience of both types of offence. Briggs reports the results from a questionnaire survey of 200 male youngsters under 17 years old with a history of taking without consent.

Which cars are most attractive to thieves?

In Greater Manchester offenders were asked what type of car they most often took and were allowed to name up to three models whilst in Northumbria they were asked what type of car was involved in their last offence. The responses to both questions revealed the popularity of Ford cars. Although this could be accounted for by the fact that there are more Ford cars on the road (Houghton, in preparation), the recently published Home Office Car Theft Index (Home Office, 1991) shows that this is not the case, ie more Fords are stolen even after allowing for their relatively high presence on the streets.
In looking at what attracts offenders to particular cars, the Greater Manchester survey showed that ‘sporty’ models (90%) or ‘expensive’ ones (74%) were most attractive. If the car was unlocked 66% of offenders said it would make the car more attractive and 70% mentioned ease of entry as more likely to lead to theft.

Press criticism of the Home Office Car Theft Index as a ‘Thieves Charter’ is clearly misplaced. The offenders are already well aware of the high risk cars and, perhaps reassuringly, the evidence from them fits well with that from the Car Theft Index.

The Greater Manchester offenders were also asked which cars they would regard as unattractive to steal. The most common reason related to the ‘image’ of the vehicle. ‘Uncool’ models were least popular, with Ladas, Skodas, three wheelers, and minis at the top of this list. Old or low performance cars were also avoided as were vehicles which might be regarded as ‘conspicuous’ for other reasons, for example Rolls Royces.

How do thieves enter cars and start them?

Again the Greater Manchester sample were asked to name three ways they used to enter or start cars whilst those in Northumbria were asked what means of instrument was used in their most recent car crime offence. In both areas force was commonly used – locks were broken or windows smashed. The most frequently mentioned ‘tool’ was a scaffolding bar used to enter the vehicle and also to break the ignition lock. This was also mentioned by 117 offenders in Briggs’ study. Screwdrivers, ‘barrel pulling’, and ‘hot wiring’ were all mentioned to a significant extent in the Greater Manchester and Northumbria studies as was the use of keys. The general impression from the survey data was that a wide variety of commonly available tools might be involved and knowledge in their use was widespread amongst the samples.

When asked how long it took to enter a car and drive away approximately 20% of the Greater Manchester offenders felt this could be done in 30 seconds or less with a further 18% taking between 30 and 60 seconds. These estimates correspond with those of the Consumers’ Association (WHICH? Magazine, 1991). Offenders said that it would take even less time to enter a car and steal the radio cassette. 36% felt that this could be done in less than 30 seconds with 13% claiming to take less than 10 seconds.

Why are the ears or their contents stolen?

In both areas offenders were asked to give three main reasons for their involvement in car crime. Excitement was the most common reason in both areas with 32% in Northumbria mentioning it first and 67% mentioning it at some point in Greater Manchester. The second most common reason related to financial gain - either
from the car as a whole, its parts or contents. Heroics and showing-off was mention by 25% of the Greater Manchester sample, but not at all by the probably more experienced Northumbria sample. For excitement and ‘to impress my friends’ were the most common reasons given for taking cars by Briggs’ sample.

These reasons echo the findings from the more in-depth interview studies carried out in Belfast and Sunderland. McCullough, Schmidt & Lockhart (1990) graphically describe the sub-culture of ‘joy-riding’ in West Belfast, where fun, excitement, showing-off, and financial gain all emerge as significant motivating factors. The description of car crime careers in both this and Spencer’s study also shows how motives may change over time.

Initially, youngsters may be attracted to cars for the thrill, but as they become more experienced in stealing and disposing of property the financial rewards may take over as the prime motivating factor.

Many offenders said that their offence was planned, rather than committed on the spur of the moment. All 17 offenders in Spencer’s study said that they planned to go out and steal a car or property from a car. 79% of Briggs’ sample of ‘joy-riders’ said they planned to steal a car, and in the Northumbria study only 20% described the offence as occurring on the spur of the moment. In Greater Manchester, where more detailed data were collected, opportunism applied differentially to theft of and from cars as table 7 shows.

<table>
<thead>
<tr>
<th></th>
<th>Take car</th>
<th>Take from car</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planned in advance</td>
<td>62%</td>
<td>32%</td>
</tr>
<tr>
<td>Spur of the moment</td>
<td>23%</td>
<td>59%</td>
</tr>
<tr>
<td>Either of these</td>
<td>14%</td>
<td>9%</td>
</tr>
</tbody>
</table>

Source: Smyth, 1990

The relevance of opportunity to car crime became clear from the Greater Manchester answers to the question ‘did many people make it easy for you to steal their car, or property from it and if so how?’ All offenders mentioned basic negligence, for example doors left unlocked (55%); keys in ignition (16%); open windows (15%). 37% felt the crime was ‘invited’ with valuables being left on view. Nevertheless, it must be remembered that these surveys also reveal that force is commonly used to get into cars.
Looking at the attractiveness of property inside cars, 77% of offenders in the Greater Manchester survey said they would break into a car just to steal the car radio/cassette. 67% said they would do so for a handbag, 79% for a leather coat, 55% for a briefcase, 31% for cassettes, 21% for shopping, and to a lesser extent for almost anything that the owner had left on view. When asked what they had taken off the exterior of cars most often, wheels were the most common item with 85% of offenders mentioning them. 63% of Briggs’ sample of car thieves said they were more interested in the car stereo than the car itself.

Where are cars taken from?

Studies of data from the British Crime Survey and of police reported incidents have both shown that cars parked in streets, public car parks, and residential communal parking bays are most vulnerable to crime (Hope 1987; Poyner & Webb, 1991). Cars are safest when parked within the curtilage of a house, on a driveway or in a garage. The data from the offenders was compatible with this. In Northumbria, 61% of offenders’ said their current offence was committed against a car parked in the street, 21% in a car park, 12% in a driveway, and 5% in a garage. Briggs’ sample identified the kerbside and open car parks as the easiest places from which to take vehicles. Comparable general data on location are not available for the Greater Manchester sample.

Alarms

83% of Briggs’ sample said that they would not try to steal a car if they knew it was fitted with an alarm. The Greater Manchester survey included a question about what the offender would do if an alarm went off whilst he was breaking into the car. The majority (64%) said they would leave it and run away. This is perhaps a reflection of the fact that 45% felt that a passerby on hearing an alarm would call the police, and 25% felt that bystanders would intervene themselves. Although 30% of offenders also felt that a passerby hearing an alarm would probably ignore it, they could presumably never be quite sure which category any particular passerby fell into – best therefore to run!

What offenders say about their driving

Briggs asked his group of offenders a number of questions about their driving ability and behaviour. Only 5% rated their driving ability as average or below. 80% considered themselves as good or very good drivers, and 15% as exceptional. 56% felt they were better drivers than the police. Answers to the question about how fast they had ever driven a vehicle ranged from 60mph to 145mph, and 46% said that they deliberately tried to get chased by the police.
What might have prevented thieves from taking or stealing from cars at all?

In Greater Manchester offenders were asked whether there was anything which might have stopped them from getting into car crime in the first place. Their answers are given in Table 8.

Table 8. “What might have stopped you getting into car crime in the first place?”

<table>
<thead>
<tr>
<th>Reason</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not being influenced by others</td>
<td>53%</td>
</tr>
<tr>
<td>Having money/work/something to do</td>
<td>28%</td>
</tr>
<tr>
<td>If consequences were brought home to me</td>
<td>19%</td>
</tr>
<tr>
<td>earlier</td>
<td></td>
</tr>
<tr>
<td>More control/punishment</td>
<td>9%</td>
</tr>
<tr>
<td>Legitimate driving opportunities</td>
<td>8%</td>
</tr>
<tr>
<td>If cars were harder to get into</td>
<td>5%</td>
</tr>
<tr>
<td>More support (e.g., from family)</td>
<td>5%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>2%</td>
</tr>
</tbody>
</table>

Source: Smyth, 1990

Clearly the influence of others was seen as the most significant factor with this being given as the first reason in 37% of cases. Car crime careers described in both the Belfast and Sunderland studies also reveal the powerful influence of peer groups. In the Northumbria study, all offenders mentioned that they had learned how to offend from friends or family.

Legitimate driving opportunities were seen as a relatively less important element and this is relevant for the likely successfulness of many of the more popular ‘wheels’ projects run by the Probation Service and other agencies. When asked specifically whether driving a go-kart on a track would give the same sort of ‘buzz’ as driving a car, 51% said no and 34% yes.

How old are first offenders?

Briggs asked his sample how old they were when they first took and drove a motor vehicle. The responses are shown below in Table 9.

Table 9. “How old were you when you first took and drove a motor vehicle?”

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>8</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response</td>
<td>1%</td>
<td>3%</td>
<td>4.5%</td>
<td>28%</td>
<td>30%</td>
<td>23.5%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Source: Briggs, 1991
Although there is nothing in either the Greater Manchester or Northumbria reports on this point, there is evidence from other studies that involvement in car crime can begin at a very early age. Cooper (1989) found from a sample of over 1,000 young people aged between 11-16 years in two schools in Greater Manchester that 56 had been detected by the police for taking motor vehicles. This figure included, those who allowed themselves to be carried in a stolen vehicle as well as those who drove the vehicles. Most of these boys were aged 15-16 yrs, but there were some as young as 11 years old. The age range of the car crime offenders interviewed by Spencer was 13-17 years, and McCullough, Schmidt, & Lockhart state that the first involvement in taking a car in West Belfast may occur at 10-11 years.

For those at a particularly young age being carried in a stolen vehicle is the more likely offence, but it is clear that any measures seeking to divert young people to more acceptable forms of excitement seeking would need to be introduced almost in primary school if they were to have any chance of success.

This point is perhaps reinforced by the studies in Northern Ireland of McCullough et al. Although the problem of car crime in Northern Ireland is numerically less than in England and Wales, there are serious ‘hotspots’ in Northern Ireland where ‘joy-riding’ can be described as of epidemic proportion and where the offence shows a resistance to conventional forms of control which come close to defying belief. McCullough et al illustrate the extent to which the practice of stealing cars in West Belfast, and the behaviour associated with it, has led to the development of a complex sub-culture within the groups of significantly disadvantaged young men of the area, where there are few if any alternative forms of status achieving available to them. The power of car theft as a source of excitement in an otherwise tedious and grey existence is made clear in the foreword to the Extern booklet written by a local JP describing his contacts with a group of ‘joyriders’ -“I found it difficult to imagine what we could provide by way of counter attraction which would offer that kind of emotional catharsis”. He was talking of young people who had experienced all the fun of the police/armed forces chase; the adulation of peers and the confidence of skilled driving. It is clearly too late to talk of diversion for these youngsters.
Summary: implications for prevention

The first part of this paper described the development of security in car design, and the growth of car ownership in this country. The speed of development and proliferation of the motor vehicle has been astonishing, and its effect on the world has been profound. In the early years of this century, cars were crude and uncomfortable affairs. They had to be crank-started by hand, and were open to the weather. The social environment was also rather hostile towards the motor car. It was regarded as a luxury item affordable by only the wealthy who raced around the roads and became rather a nuisance.

It is less than 100 years since Gottlieb Daimler and Karl Benz pioneered the petrol driven motor vehicle. In this time developments in the design, production, and marketing of cars have turned these into everyday objects, with most households now owning or having access to a motor vehicle. Today’s cars are vastly superior machines, driven by powerful engines and equipped with all sorts of electronic features designed to provide an extremely comfortable, and perhaps exciting, ride for the driver and passengers. The car has become a central and dominating feature of life, with much of the environment being designed to accommodate it. More and better roads had to be built, fuel had to be easily available, house design had to include garaging or off-street parking, and town and city centres had to be planned to cope with traffic and parking requirements.

It is, therefore, not surprising that thefts of and from cars have become such problems in this environment. The studies described in the second part of this paper reveal the attractiveness of cars to young people, and the very early age at which some become involved in car crime. Cars area source of excitement and provide away of impressing friends, as well as the possibility of financial gain. These are very strong influences that resist even the severe punishments administered in Northern Ireland. In 1987, paramilitary organisations carried out 60 punishment beatings and 124 punishment shootings to ‘joy-riders’ in Northern Ireland, yet the problem persists.

It is quite clear that any attempt to reduce car crime nationally will not be an easy task. The first part of this paper was able to show the beginnings of an effect of car security on car crime, and illustrates its potential. More needs to be done in relation to securing the perimeter of the car – this will help in reducing theft from cars. Car radio/cassette parts need to be dispersed throughout the vehicle and the public need further encouragement to secure their valuables or not to leave them in parked cars. A more effective immobilising device, as a supplement to the steering
column lock, is also needed. The garaging and parking arrangement for cars also need to be reviewed with attention being paid to opportunities for increased surveillance. Finally, the attitudes and behaviour of young people need to be changed. This is clearly the most difficult area to envisage effective action given the attraction and power of the motor car in society today.
References


Crime Prevention Unit Papers

1. Reducing Burglary: a study of chemists’ shops, 
   Gloria Laycock. 1985. v+7pp. (0 86353 154 8).


3. Property Marking: a deterrent to domestic burglary? 

   Dean Southall and Paul Ekblom. 1986. v+25pp. (0 86252 222 6).

5. The Prevention of Shop Theft: an approach through crime analysis. 

   Nigel Hill. 1986. v+15pp. (0 86252 245 5).


   Kevin Heal and Gloria Laycock. 1987. v+29pp. (0 86252 297 8).

   Paul Ekblom. 1987. v+34pp. (0 86252 300 1).

10. Getting the Best Out of Crime Analysis. 


    Sohail Husain. 1988. v+63pp. (0 86252 314 1).


    1988. v+18pp. (0 86252 337 0).


23. The Kirkholt Burglary Prevention Project: Phase II. David Forrester, Samantha Frenz, Martin O'Connell and Ken Pease. 1990. v+51pp. (0 86252)


