6 School design and burglary

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This chapter reports a research study which examined the link between the design of schools and their vulnerability to burglary (see also Hope, 1982; 1985). It set out to determine whether situational design features associated with school buildings could account for the variation in rates of burglary between individual schools. The chapter first reports the findings of this study and then draws some specific recommendations for reducing the risk of burglary in schools. It concludes with a broader assessment of the implications which this study has for situational crime prevention.

The sample consisted of 59 separate school sites within the Inner London Education Authority (ILEA). There seemed merit in concentrating effort where burglary was most prevalent. Consequently, the study focused on single-sex boys' and co-educational secondary schools which had the highest rates of burglary amongst ILEA schools. All the schools were regarded as having a mixed ability or 'comprehensive' intake of pupils. The research was based on an analysis of ILEA records, interviews with head teachers and caretakers, and site surveys, and gave information on: the characteristics of burglary; the areas in which the schools were located; the design of school buildings; and certain aspects of their management. Between 1976 and 1978 these 59 school sites suffered 430 burglaries between them. As with other forms of burglary, relatively few persons are convicted of burglaries to schools and it was not feasible to discover who breaks into schools nor what their motives might be. Head teachers and caretakers, however, were able to describe what they regarded as typical burglaries to their schools. According to them, the most common type of burglary was more a 'nuisance' than anything else. It was thought that these usually involved local adolescents who were familiar with the school layout. Little of value was stolen during these incidents unless it happened to be lying around; there may have been some damage but rarely anything serious. Less common, in their view, but still comprising a substantial number, were what might be thought of as 'professional' burglaries; where a concerted and planned attempt was made to steal expensive audio and visual equipment. Schools did not seem to suffer very often from 'malicious' burglaries involving substantial vandalism and serious incidents of arson also seemed rather rare. Some corroboration of these impressions was obtained from ILEA records. Just under half the burglaries during the three year period involved the theft of equipment whose replacement value was £25 or less (at 1978 prices). Nevertheless, 30 per cent of burglaries involved equipment which cost £100 or more to replace. It was, however, impractical to quantify from ILEA records the damage caused during burglaries. Most burglaries occurred late at night, many at weekends.

Although school burglaries seem fairly trivial for the most part, they nevertheless represent a breach in the security of school buildings which might at some time turn into something more serious. What is also worrying is that some schools suffer far more from burglary that others. In this sample, a quarter of the schools accounted for over half of all the burglaries, while half the schools produced no more than a tenth of the total number of burglaries. The next step therefore was to see why this was so; and especially whether schools with markedly different rates of burglary also differed in their design or location.

The effect of school design

Details of the design of schools were derived from site plans for each school supplemented by direct observation by the author. Some 13 variables were used to characterise the overall design character of individual schools, which reflected its size, layout and the character of its buildings and grounds. These variables accounted for a sizeable proportion of the variation in burglary rates between schools (R = .48; p.<.001). Preliminary analyses found that they were highly inter-related and it was decided to form them into a simple scale to express the overall design character of each school (Hope, 1982).

Table 6.1 Design attributes associated with schools high or low on the design continuum scale.

	Schools low on Scale	*Schools high on Scale*
1. Area of buildings	small	large
2. Area of site	small	large
3. Number of buildings	few	many
4. Concentration of buildings	concentrated	diffuse
5. Compactness of buildings	compact	sprawling
6. Height of tallest building	'low-rise'	'high-rise'
7. Proportion of single storey structures	none	some
8. Amount of glazing	little	substantial
9. Age of buildings	old	modern
10. Buildings of different ages	same age	different ages
11. Density of buildings to site	dense	sparse
12. Proportion of site under grass	none	mostly grass
13. Whether 'landscaped'	none	trees, flowerbeds etc.

Note
All descriptions are relative to the maxima and minima of the attributes within the sample measured.

To understand this scale it is helpful to contrast two types of school which might be found at either end of this design spectrum (Table 6.1). Schools located towards the lower values of the scale were small, compact schools mostly built before 1920. Their buildings were concentrated on restricted sites devoid of grass, trees and shrubs. They tended to be brick-built and not have substantial areas of glazing. They can be conveniently described by the abbreviation SOC (short for 'small, old and compact'). Many of these schools are typical of the classic 'Board School'

design (Seaborne and Lowe, 1977). At the other end of the spectrum can be found large, post-1945 or remodelled schools. Their somewhat 'sprawling' buildings were set in extensive grounds which were often grassed and landscaped. Their buildings varied substantially in height and often contained large areas of glazing, For convenience, these will be termed LMS schools (short for 'large, modern and sprawling').

The design of schools - as expressed by the design scale - was significantly related to the frequency of burglary (r. = .53; p. .001). A detailed examination of Table 6.2 helps to illustrate the differences in burglary rates between different types of school. Although schools at the SOC end of the design scale had significantly fewer burglaries than other schools, as schools more closely resemble the LMS design tendency, differences in burglary rates become much more variable. While LMS-type schools had the highest rates on average, the range of variation was much greater - some, in fact, had rates similar to SOC schools. There are therefore problems: first, why SOC schools should have uniformly low rates of burglary; and second, why certain (predominantly LMS) schools should suffer markedly different rates of burglary although they are of similar design.

Table 6.2 Frequency of burglaries in different groups of schools within the design continuum, 1977-1978

	SOC schools (low on design continuum) (n. 20)	*Schools intermediate on design continuum (n. 19)*	*LMS schools (high on design continuum (n. 20)*	*Total schools (n. 59)*
Number of schools burgled:				
10–24 times	–	4	7	11
5–9 times	1	3	6	10
1–4 times	12	10	5	27
Number of schools not burgled	7	2	2	11
Average number of burglaries per school	1.4	5.1	7.9	4.9
Index of variation in burglaries within groups (variance)	2.2	23.9	42.2	29.3

Differences in burglary rates between schools could not be accounted for by differences in areas in which schools were located nor the characteristics of their pupil intake; although these factors increased the probability of burglary in combination with design. In addition, although LMS schools had greater numbers of pupils than SOC schools, their generally higher rates of burglary seemed due to differences in design rather than, perhaps, to a greater number of potential offenders. It therefore seems that a school of an SOC design is not attractive to burglars.

One explanation might be that a small, compact school provides a beneficial atmosphere, discouraging the growth of anti-school sentiments amongst its pupils.

There is a body of evidence suggesting that schools which create a sense of involvement amongst their pupils suffer less crime (National Institute of Education, 1978), have less misbehaviour during the school day (Ruttcr *et at.*, 1979) and have fewer pupils who become involved in delinquency (Reynolds and Jones, 1978). It could be that SOC schools provide an 'ecological setting' (cf. Barker and Gump, 1964) which enables beneficial staff/pupil relations to develop naturally, while only some larger schools manage to overcome the deleterious effects of size. Unfortunately, the data in this study were insufficient to test this hypothesis.

There is, however, another explanation of the absence of burglary at SOC schools; they may provide fewer *opportunities* for burglary. There are perhaps three broad types of opportunity for burglary in schools: opportunities for access to premises; opportunities to commit burglaries without being seen (surveillance); and the availability of property to be stolen. SOC type schools appeared to offer fewer opportunities for burglary than other schools. First, they seemed less accessible. They more often had: high, brick-built perimeters; heavy wooden sash windows protected by grills; robust external doors and few opportunities to gain access to roofs. Second, they seemed to afford greater opportunities for surveillance. They were situated in areas of greater population density, and in less suburban areas. They tended to be close to public thoroughfares and their perimeters consequently benefited from ample street lighting. Because they had simple compact layouts, less of their building exterior was hidden from view and it was in any case better illuminated by lights which were fixed directly to building exteriors. All this suggests that people living in the vicinity of schools, along with resident caretakers, had good opportunities for surveillance. These schools may also have had less equipment available to be stolen since they were more likely to have fewer pupils and were more often part of split-site schools. They may therefore be less attractive to 'professional[1] burglars.

On all three counts - access, surveillance and the availability of equipment - LMS schools generally seem to be more conducive to burglary. They were situated in quiet, suburban neighbourhoods away from main roads and the size of their buildings and grounds probably meant that, once inside, burglars could operate without fear of being seen. Size also meant that there were a greater number of secluded and easily accessible places of entry in LMS schools compared to SOC schools. Since they had a larger number of pupils and were more likely to be used for a variety of purposes in the evening, they were more likely to have valuable property available for theft. Nearly all schools had some evening use, but a greater amount of use at LMS schools seemed not to deter the burglars, probably because burglaries tended to occur late at night.

Differences between schools **of similar design**

Although LMS schools had more burglaries than SOC schools, some schools (mostly, but not all, towards the LMS end of the spectrum) had considerably more burglaries than others with similar designs. What are the reasons for this? Part of the reason may be that these schools had even greater opportunities for burglary

than others. Those 'non-SOC schools with high burglary rates offered greater opportunities for access to roof areas (and consequently a greater total amount of access opportunities) and were less open to informal surveillance from the caretaker's house.

There is also some suggestion that 'school factors' might reduce the vulnerability of some non-SOC schools. A greater number of these schools were voluntary-aided, fewer of their children came from broken homes and fewer lived near their schools. It would however be necessary to mount further research to explain these findings. One possible explanation might be whether their pupils identified more closely with them, either because of parental support, a denominational connection or through efforts by the schools themselves. Alternatively, these schools, paradoxically, may be less accessible and familiar to the surrounding community. Not only were their pupils more likely to live outside the immediate area, but the schools were also much less likely to host local authority youth centres and adult education institutes. Although they were used just as frequently in the evenings as other schools, their activities were more private or school-based.

Policy implications

The design of schools seems to have a significant influence on the number of burglaries they suffer. This raises three possibilities for prevention: building schools to different designs; changing educational policies; or seeking piecemeal environmental improvements to existing schools. There seems little prospect of reducing school burglaries by building different schools since it is likely that the projected decline in the school-age pupulation for some years to come will be met by taking the older, smaller schools out of commission, with relatively little new school building (Department of Education and Science, 1977). Nevertheless, in the future it may be possible for architects when designing or remodelling schools to take opportunities for access and surveillance into account. Although there have been some encouraging developments in this direction (e.g. Zeisel, 1976; Greater London Council/ILEA, 1977) more 'development[1] work is undoubtedly needed. Changing the way schools are run in order to reduce burglary seems hampered by the absence of a reliable empirical basis for intervention. Much of the evidence to date is scant or equivocal. Moreover, research into the relationship between educational approaches and misbehaviour in schools is difficult to mount and may require substantial time and effort (cf *RuUeretal.*, 1979). Nevertheless, changes can and do occur in the way schools arc run and it would be instructive in the future to see whether such changes had any **influence on** the rate at which schools suffered from crime.

More promising, at least in the short term, are piecemeal environmental improvements to schools. What seems sensible is a more strategic approach to burglary prevention. Here, this research may have helped in drawing attention to the most vulnerable schools where most effort is needed. For example, there seems little need to improve the security of SOC type schools (although existing arrangements ought to be maintained) and attention might usefully be turned to LMS type

schools. Three improvements arising from this research seem worth exploring. First, a case could probably be made for additional night-time surveillance at the most vulnerable schools. Although all schools in the study had a resident caretaker, the scale and design of LMS type schools may reduce their deterrent effect, since it seems much more difficult in these schools for a caretaker to be aware of night-time intruders who might be on the premises. Second, the lighting of LMS school sites could be improved to increase the surveillance of the premises by caretakers and passers-by, and to scare off intruders. Finally, gains could probably be had from improving 'crime prevention management'. For example, caretakers identified a large number of places in schools which burglars had used more than once to gain entry. These entry points might be better secured. Fire regulations seem to come into conflict with security at some schools, and better co-ordination between fire safety and security planning might lead to improvements in security. Schools might also look to the crime prevention implications of their day-to-day practices (for instance, in the use of audio-electronic equipment). None of these measures are particularly innovative or on an especially large scale but they may achieve reductions in burglary at relatively little cost. It is therefore suggested that local education authorities, with the help and advice of local police forces should look to small scale environmental and management improvements to reduce school burglary. These are most likely to be effective if they are applied selectively, concentrating effort in schools where burglary is most prevalent.

Broader implications

This study examined the variation of crime rates across a number of different school buildings. As such it used a 'cross-institutional' research design which, by using correlational methods of statistical analysis, can allow the contribution of individual factors affecting crime rates to be identified. This method has been frequently employed in the Home Office Research and Planning Unit's work both to evaluate processes of penal treatment (Clarke and Cornish, 1983) and, more recently, the role of situational factors in crime (Clarke and Mayhew, 1980). The method, however, is dependent upon the extent and nature of variation in crime rates and other variables in the sample under investigation. In this particular sample , the form of variation between schools has two important implications for the application of the situational approach to reducing school burglary.

In the first place, the individual design features of school buildings which contributed to their vulnerability (e.g. high perimeters, sprawling sites) were highly inter-related. In other words, they were all related aspects of school architecture. This is because the modern history of school building in Britain has been characterised by great waves of construction where many buildings were erected over a relatively short period, usually with standard building materials and techniques (Seaborne and Lowe, 1977). Consequently, exceptions to the general styles of building are relatively rare. This does, however, make it difficult to assess the effect of individual design features which might be modified in the interests of prevention. For example, it would have been difficult, using this sort of research

design, to assess whether higher perimeter fences might reduce the risk of burglary at LMS schools since there were not enough examples of LMS schools with high perimeters to make a reliable statistical comparison with other LMS schools. This problem does impose a certain limitation on the usefulness of this study. In the absence of enough current exceptions to assess future piecemeal design modifications, we are faced with the prospect of either completely re-designing schools to remove everything associated with the LMS design tendency (which is unrealistic) or of experimenting rather blindly with piecemeal changes (which is rather risky and inefficient). It must be hoped that enough experience is eventually acquired so that more precise estimates of the effectiveness of individual design modifications can be made.

A second issue arising from the form of variation is the correlation between design features and social and organisational characteristics. SOC schools seem to possess a constellation of 'protective factors'. Chief among them is building design which provides fewer opportunities for burglary, but other factors may also be important - in particular, the beneficial ethos of small schools, their denominational character, and their lack of evening facilities which may render them unfamiliar to prospective burglars. It would seem that, as schools come more closely to resemble the LMS design tendency, the coalescence of protective factors begins to dissipate. As with the non-SOC schools in this sample, protection may be afforded by more variable or unique circumstances, which may account for the greater variation in burglary rates. Again, there needs to be a comparison between more non-SOC schools than in this sample if reliable conclusions are to be reached about the causes of this variation. Having established that SOC schools are fairly invulnerable to burglary, there seems no more need to consider them (and they are on the way out anyway). Rather, attention should be turned to finding out why some LMS schools have lower burglary rates than might be expected on the basis of their general design.

A final point is worth making about the likely motives of offenders. It appears there may be different objectives in school burglary - in particular, between nuisance burglars (presumably young adolescents) and serious professional or malicious burglars who may have more specific objectives such as theft or vandalism. However, this poses a problem for prevention. A prevention strategy which focused on providing greater security for school equipment (such as the use of safes, alarmed areas, etc.) might prevent professional burglary but might not affect nuisance burglary. A strategy which concentrated on making it difficult to break-into schools would probably affect all kinds of burglary but would be much more difficult to achieve (especially in the most vulnerable LMS schools). In this sense, preventing burglary in schools becomes a matter of choice between costs and benefits.