

Reduction of Telephone Vandalism: An Australian Case Study

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In recent years, Australia's national phone company (Telecom) faced a problem of public telephone vandalism of major proportions. Much of this vandalism was associated with attempts to steal from phone coin safes but also included unfocused damage to phone kiosks and equipment. A multifaceted campaign designed to reduce vandalism was instigated by Telecom. A variety of techniques was used in this campaign including target hardening, surveillance of "at-risk" phones, and public education. An analysis of target-hardening measures in one region of Australia demonstrates that this technique has been particularly effective in reducing the rate of vandalism. Indeed, across the country as a whole, Telecom was able to reduce the cost of vandalism from A\$18.25 million in 1987-88 to A\$9 million in 1988-89, as a result of their campaign.

Keywords: Australia; coin box theft; situational crime prevention; telephone design; telephone vandalism.

Introduction

The nature and extent of telephone vandalism vary from one nation to another. Although estimates are diverse, it appears that damage to public telephone systems is widespread in countries such as Australia, United States, and the United Kingdom, whereas in Switzerland and in Scandinavian countries, its incidence appears to be relatively low (Noschis, 1984). Australia and United States, for example, are reported to have, respectively, 20% and 11% of their public telephones out of service through vandalism each year (*Daily Telegraph*, 1987).

Although the rates may vary, public phone vandalism is a significant problem in most nations—in terms of cost to the provider and inconvenience to the public. In the United States, it is estimated that repairs and losses due to vandalized phones amounted to \$19 million in the New York State system alone for 1987-88. As with other countries, this loss consists of wanton vandalism such as graffiti placed on structures, cutting of telephone cords, jamming coin slots with foreign objects, and related damage.

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Vandalism also results when a theft is being attempted, and, in this regard, telephone coin boxes are attractive targets for those seeking easy cash.

The reasons for comparative differences in vandalism rates across countries are still unclear, though it has been suggested that cultural traits such as respect for cleanliness and order are related to low rates of vandalism in some nations (Noschis, 1984). However, other research indicates that levels of vandalism are directly related to design features of public telephone facilities (Mayhew et al., 1980). Thus, in the United States, public telephones are placed in open pedestals where only the telephone itself is covered. In Australia, which has a higher rate of telephone vandalism than does the United States, the telephone devices are fully enclosed in glass booths with sealed doors for privacy and protection from the elements. Markus (1984) notes that in Britain a substantial proportion of vandalism incidents is directed at telephone booths, rather than at the equipment. Open pedestal designs would therefore be expected to result in lower rates of vandalism. The increase in privacy in the case of booths may also increase the opportunities for vandalism and theft to occur.

It is suggested that the siting of public telephones also affects the opportunity structure as it relates to the incidence of vandalism. Generally, phones that are not on main roads or close to public amenities are more susceptible to vandalism (Mawby, 1977). However, the characteristics of location are complex. One British study found that heavily used public telephone kiosks in Glasgow, the most vandal-prone city in the United Kingdom, suffered relatively little. These kiosks were often sited at railway stations, in airports, and in city shopping centers. On the other hand, public telephones with medium usage in city areas had high rates of vandalism as did telephones in rural areas with very low rates of use (Markus, 1984).

The social characteristics, particularly the age structure, of the population residing in the immediate area of pay phones are also important when considering rates of vandalism. These can reflect the "surveillance" capabilities of the neighboring population as well as the likelihood of the risk of pay phone crime by young males who are most often the offenders (Mayhew et al., 1980).

The Australian Experience

This study examines incidents of vandalism and theft in the more than 32,000 public phones that exist in Australia. Most of the data referred to were supplied by Telecom—the government statutory authority that

is the sole communications operator for both private and public telephone facilities. The data are limited to gross details of costs and incidence as well as descriptive information regarding arrests of offenders. Despite the obvious limitations of the data, they are the best currently available. It is clear that not all incidents of vandalism were reported to Telecom or to the police and that figures available do not reflect systematic and reliable data (Telecom, 1989). However, an internal investigative unit has been established within Telecom, and future statistics are expected to be more comprehensive and uniform. This preliminary examination of the effects of the introduction of certain situational design measures is nevertheless instructive.

The problem of telephone vandalism and theft in Australia, by any criteria, is a major one. During some periods in recent years, up to 60% of public telephones in the metropolitan areas of the two major Australian cities of Sydney and Melbourne were out of use because of vandalism. In just 1 month (May, 1986), there were 740 cases of theft and 70 acts of vandalism committed on the 12,000 public telephones in the state of New South Wales. During another 1-month period (April, 1986), 300 of 742 public telephones in the Burwood area of Sydney were out of service because of theft. Most frequently, coin boxes were torn open in order to obtain money, whereas other examples of vandalism include damage to the equipment (handsets, cords, dials, castings), the jamming of money slots, the destruction of telephone directories, and glass breakage or other damage to the booth structure (Telecom, 1989).

The cost of this damage is extremely high. Records kept by Telecom show that in the financial year 1986-87, A\$4 million was lost through theft alone and A\$12 million in vandalism associated with theft and related destructive behavior directed at the phone equipment or the cubicles enclosing the equipment. The cost for 1987-88 of public telephone vandalism rose to A\$18.25 million (Jamieson, 1988).

Though records of apprehended vandals are poor indicators of persons committing offenses, it appears that most offenders were in the 15-19 age group (61.9%), of whom 36.7% were students and 23.5% were unemployed. It was suggested by Telecom officials that perhaps up to one-third of the offenses were drug- or alcohol-related, but this estimate should be considered as highly speculative (Community Welfare Advisory Committee on Vandalism, 1978).

The problem of theft and vandalism of public telephone facilities was therefore a major one for Telecom. Not only was Telecom severely embarrassed by having so many phones out of order, but their cus-

tomers were complaining, strongly and publicly, about the difficulties of finding a working street telephone. At the same time, the federal government was encouraging Telecom to become more profit-oriented and there was some discussion of privatization. The political developments accelerated the need for action by Telecom to reduce the incidence of telephone vandalism. Between 1985 and 1989, Telecom commenced a concerted program to rectify the problem.

Intervention Strategies

Telecom adopted a number of approaches to combat telephone vandalism. Most of these approaches have been introduced at varying points of time and in different locations and no systematic attempts have been made by Telecom to evaluate the effectiveness of each particular measure. Basically, three main approaches are evident.

1. Awareness Campaigns

These media campaigns, directed at the general public, emphasize the importance of the public telephone as a lifeline for emergencies or for those in personal distress. Neighborhood Watch groups were encouraged to include local telephone kiosks in their surveillance, and reporting activities and specific programs on the importance of the public telephone system were developed for schoolchildren (Jamieson, 1988).

2. Improved Detection of Offenders

The payment of rewards of up to A\$2,000 were introduced for information leading to the detection of offenders. It was not necessary for an offender to be convicted in court before a reward was paid. These rewards were not advertised because it was thought that making known that money was available for information may have contributed to further acts of vandalism. In addition, within Telecom, special investigative groups were established to mount surveillance operations against vandal-prone public telephones. These operations were responsible for a number of arrests (Jamieson, 1988).

3. Target Hardening and Related Measures

A range of target-hardening measures were introduced. These measures included the replacement of glass with wire-mesh in the lower walls of some phone boxes, the use of polycarbonate windows, and the strengthening of the telephone units through changes in design. In addition, some phones were equipped with electronic sensors that send signals to the nearest police station when tampering occurs.

Perhaps the most important target-hardening measure, however, was the introduction of a new coin box, with an almost impenetrable door, invented by a Telecom engineer. Known as the Kirk Safe, after its inventor, the safe proved resistant to attack by oxy-acetylene equipment, hydraulic jacks, most drills, and bricks. It was, however, expensive and has only been used for the most vulnerable targets. In some areas as well, a special, toughened coin-safe "wave" door was introduced that made entry into the compartment holding the money more difficult.¹ Further experimentation is continuing to develop strong but less expensive safes that can be replaced quickly when damage occurs.

In addition, a trial program has begun recently where some public phones can be operated by use of plastic credit cards. Clearly, with no money being deposited in the telephone safes, there is no incentive for theft. As well, some limited resiting of telephone booths to more brightly lit streets occurred, whereas phone boxes that were found to be uneconomic have simply been removed altogether (Jamieson, 1988).

Effects of Intervention Strategy

The lack of systematic records on public telephone vandalism and the fact that technicians in the past did not always report damage to telephones that they repaired made it extremely difficult to assess the effectiveness of each of these individual preventive techniques. Though some records were kept of vandalism and theft incidents in different regions of the country, these records could not be correlated with the introduction of various preventive measures. In the states of New South Wales and Victoria, for example, a number of preventive strategies ranging from target-hardening measures to increased surveillance of public telephones was introduced. The way in which

¹The "wave" door derives its name from its design, which is mainly a flat plate with a raised section designed to provide protection over the locking pin. This design gives the appearance of a wave motion.

Table 1. Incidents of Public Telephone Vandalism and Protective Measures Taken in South Australia-Northern Territory Region from September 1987 to April 1989

Time Period*	Incidents of Vandalism	Protective Measures Taken
1	1059	No target-hardening measures
2	1656	Measures introduced in December 1987, with 100 wave doors and 20 Kirk Safes installed by May 1988
3	2033	
4	2359	
5	3839	A further 229 wave doors installed by March 1989
6	3553	
7	2361	Installation of wave doors to all 1,800 metropolitan units in South Australia commenced in March 1989
8	1623	
9	814 ^b	
10	554	

*Each time period covers approximately 2 months.

^bBecause of a computer fault, this figure is estimated for Period 9 on the basis of records kept for 1 month only.

these measures were introduced made it impossible to evaluate the effectiveness of any one specific preventive method.

In the regions of South Australia and the Northern Territory, however, it was possible to see more clearly how target-hardening measures affected rates of theft and vandalism. *Table 1* reports the incidents of vandalism from September 1987 to April 1989 across ten 2-month periods. The table covers recorded incidents of vandalism to the 3200 pay phone units in the South Australia-Northern Territory region.

In the 18 months prior to September 1987, the incidence of vandalism was fairly low, averaging 650 cases per 2-month period. However, by mid-1987, the rate began to climb, peaking at 3839 incidents in Period 5. The increase in vandalism incidents that began in the region in early 1987 mirrored a similar increase throughout the country as a whole. At this stage, it is not possible to say why a sudden increase in vandalism occurred at that time.²

As a result of this increase, a major effort was begun in South Australia and the Northern Territory to "target harden" public telephones. By Period 5, Telecom had introduced 100 wave doors and 20 Kirk Safes to pay phones in the region. These target-hardening measures continued to be introduced gradually so that by Period 9 a further 229 wave doors had been installed as a direct result of coin-safe thefts.

However, at the beginning of Period 10, Telecom commenced a large-scale Protection Maintenance

²Criminologists know very little about how "fads" in crimes begin, continue, and end. There is a fruitful area for research here.

Program. This program was completed in June 1989 with the result that nearly half of all the 3200 phone units in the region had wave doors installed. This represented 100% protection of all the 1800 units in the South Australian metropolitan area. Computer-generated data are not yet available for the months following Period 10 as reflected in *Table 1*. Telecom officials from the region have instead provided manually collated data for the interval subsequent to the completion of the Protection Maintenance Program. They report that there have been only 35 incidents of vandalism from June to November 1989 and that less than 15% of these recent incidents were directed at modified targets, and all proved unsuccessful in terms of attempted theft.

Telecom officials in the region are convinced that the decline in the incidence of vandalism was due to the "program to fit payphones with either the coin safe wave door and Kirk Safe." Though no separate figures are available, officials also reported that during 1989 specific vandalism to the mechanism that received coins was reduced as well. This was due to the fitting of a coin-head modification mechanism that made vandalism more difficult (Lester, 1989). Thus, these target-hardening measures were clearly effective.

Conclusions

Across the country, a campaign by Telecom to reduce vandalism and theft in public telephones appears to have been successful. For the fiscal year 1988-89, the

cost of repairing damaged public telephones had been reduced to A\$9 million, down by over 50% from the 1987-88 high of A\$18.25 million (Lester, 1989).

Though a variety of different methods was used across all jurisdictions to achieve this result, it is apparent from the data in the South Australia-Northern Territory region that target-hardening measures were particularly effective. Telecom officials believe, however, that in the states of New South Wales and Victoria the surveillance operations by Telecom security personnel and the apprehension of some professional phone box thieves contributed to the decline in vandalism and theft. No firm statistical data are available to confirm or disprove this assertion.

Although it appears that professional gangs were operating in these states when the incidence of vandalism was high, it should also be noted that most apprehended vandals are between 15 and 19 years of age, indicating that most telephone vandalism is committed by young, usually male, juveniles (Gladstone, 1978). Prevention efforts must continue to recognize this fact as it has particular implications for the siting of phones in neighborhoods with high densities of youthful populations (Mayhew et al., 1980).

Telecom officials consider that the reduced opportunities for vandalism and theft through target-hardening and surveillance measures led initially to displacement. Officials assert that the introduction of the Kirk Safe and better surveillance in New South Wales early in 1986 caused a gang of offenders to move their operations to Victoria. Here, the gang committed numerous offenses as they journeyed down the Victorian coastline. When they returned to New South Wales, Telecom investigators were also able to trace the specific route they took by the number and location of public telephones broken into. However, Telecom administrators believe that when the Kirk Safe was introduced more widely throughout both states vandalism offenses diminished considerably. Again though, hard data are lacking to support this assertion.

It was not possible either to ascertain from the records kept by Telecom on how a limited program of resiting public telephones affected vandalism rates. The operation of natural surveillance probably has some effect by providing guardians against vandalism and theft, though the effects are not strong and may not warrant the cost or effort of moving the phone boxes (Mayhew et al., 1980). Although surveillance may limit the rates of vandalism and theft, relocation of boxes to more public areas where they can be watched is certainly preferable to the total removal of public phone facilities from troublesome areas. A more effective strategy might be to encourage the instal-

lation of public telephones for public use inside stores, hotels, and other businesses (Mayhew et al., 1980). This strategy, by way of "gold phones," already has been begun by Telecom. In addition, North American experience suggests that the opportunities for theft and vandalism are reduced by the open pedestal design, which could be usefully tried in Australia.

It is important to note that the firm finding in regard to the effectiveness of target-hardening measures that was apparent from the South Australia-Northern Territory data confirms research carried out elsewhere in the world. Thus, in London, it has been observed that cash losses from public telephones reduced in 1976-77 to 4% of the figure for 1971-72. This success was attributed to the introduction of steel covers for cash compartments. In addition, other target-hardening mechanisms such as shatter-proof handsets and reinforced cables reduced other forms of vandalism to the telephone mechanism (Markus, 1984). These measures are remarkably similar to those used by Australian Telecom with such success.

The recent creation of a crime prevention unit within Telecom will undoubtedly assist in considering other ways of reducing the opportunities for vandalism and theft to occur. The unit will collect reliable and systematic figures on crimes committed against Telecom facilities. In addition, the establishment of the unit will allow Telecom to consider the relative cost and effectiveness of a whole range of situational measures used to prevent public telephone vandalism and theft including the siting of public phones, surveillance by enforcement personnel, and, of course, further developments with target-hardening programs.

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References

- Community Welfare Advisory Committee on Vandalism. (1978). *Report*. Adelaide: South Australian Government Printer.
- Daily Telegraph*. (1989). *Can Mercury vanquish the vandal hordes*. London.
- Gladstone, F. J. (1978). Vandalism amongst adolescent schoolboys. In R. V. G. Clarke (Ed.), *Tackling vandalism*. Home Office Research Study No. 47. London: Her Majesty's Stationery Office.

- Jamieson, B. (1988). Public telephone vandalism. In Chaling, D. (Ed.), *Preventing property crime*. Canberra: Australian Institute of Criminology.
- Lester, P. (1989). Cost of telephone vandalism. Personal communication.
- Markus, L. L. (1984). British Telecom experience in payphone management. In C. Levy-Leboyer (Ed.), *Vandalism: Behaviour and motivation*. Amsterdam: Elsevier.
- Mawby, R. I. (1977). Kiosk vandalism: A Sheffield study. *British Journal of Criminology*, 17, 30—46.
- Mayhew, P., Clarke, R. V. G., Hough, J. M., & Winchester, S. W. C. (1980). Natural surveillance and vandalism to telephone kiosks. In R. V. G. Clarke & P. Mayhew (Eds.), *Designing out crime*. London: Her Majesty's Stationery Office.
- Noschis, K. (1984). Countries without vandalism. In Levy-Leboyer, C. (Ed.), *Vandalism: Behaviour and motivation*. Amsterdam: Elsevier.
- Telecom Australia. (1989). *Public telephone vandalism* (Working papers).



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