



ARSON IN NSW

EACH YEAR in New South Wales the Fire Brigade and Police attend between 20,000 and 30,000 fires. Of these, approximately 12,000 fire incidents are considered to contain some element of suspicion, with about 4,000 fires being directly attributed to arson. A popular view is that arson, like many other social crimes such as vandalism and assault, is on the increase.

This bulletin presents information on the extent and nature of arson in NSW. It provides information on the cost of arson and the types of property targeted. It details the times when arson is more likely to occur, and what incendiary (i.e. fire-lighting) methods are used. Information is also provided on the characteristics of alleged offenders.

The material in this bulletin is drawn from a number of primary sources: from the NSW Police Department's Crime Statistics for 1987/88, from the NSW Board of Fire Commissioners record of fires for 1987, and from a study of over six hundred arson incidents that occurred in the twelve month period from the 1st of July 1987 to the 30th of June 1988 conducted by the NSW Bureau of Crime Statistics and Research.

THE DEFINITION OF ARSON

Arson is the intentional or malicious act of destroying or damaging property by means of fire. Legally, arson is dealt with under the general criminal destruction and damage provisions of the Crimes Act 1900 (Chapter II). Most arsons involve the burning of private property with the deliberate lighting of fires in shops, offices and dwellings, and the torching of motor vehicles being common. This list of targets gives some indication that arson may be carried out for financial reasons. The act of arson and subsequent fraudulent insurance claims permits the liquidation of unwanted and/or over-valued assets - "wrecking for reward" as one

writer put it.¹ Nonetheless, arson of public property represents thirty per cent of all cases of arson and indicates that other motives exist beside fraud. Some of the motives, other than fraud, commonly mentioned¹ are:

- revenge, spite and vandalism (particularly in relation to the deliberate lighting of fires in educational, religious, legal or political institutions);
- the use of fire in an attempt to conceal other crimes (e.g. theft, murder);
- pyromania (while popularly entertained as a cause of arson may, realistically, be involved in only a very small proportion of all arson incidents).

THE INCIDENCE OF ARSON IN NSW

Arson has been labelled "clearly the fastest growing crime in the western

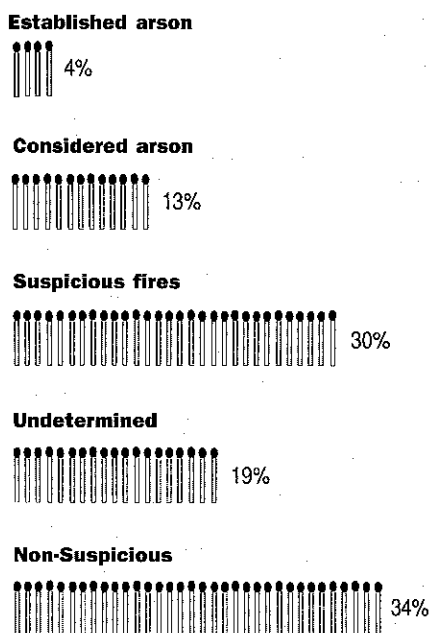
world".² The situation in Australia may be taken as a reflection of the magnitude of this world-wide problem. In NSW, the rate of reported arson has doubled every eight years since 1964³, and for every one established arson, there are approximately six fires that are considered to be suspicious or likely to have been deliberately lit⁴ (Figure 1).

As with most crimes, the incidence of arson is best expressed as a rate (i.e. the number of arsons per 100,000 head of population) which takes into account any fluctuations in the size of the population. The NSW Police Department indicates that there were 2,169 recorded arson offences in 1987/88 representing a rate of 39.5 offences per 100,000 persons.⁵ Over the fourteen year period from 1975 to 1988, the NSW arson rate increased by 365% on the 1975 rate of 8.5 offences per 100,000. Population, over the same period, increased by only 14.3%.⁶ However, since 1985/86 the arson rate appears to have dropped by around 31% (Figure 2).

While the rising trend in arson is alarming, the general apparent increase in the NSW arson rate should not be attributed solely to an 'epidemic' increase in the crime of arson. The figures may reflect the actual or real level of arson, however, a number of factors relating to an increase in investigative activity, may contribute to the apparent increase in the level of arson:

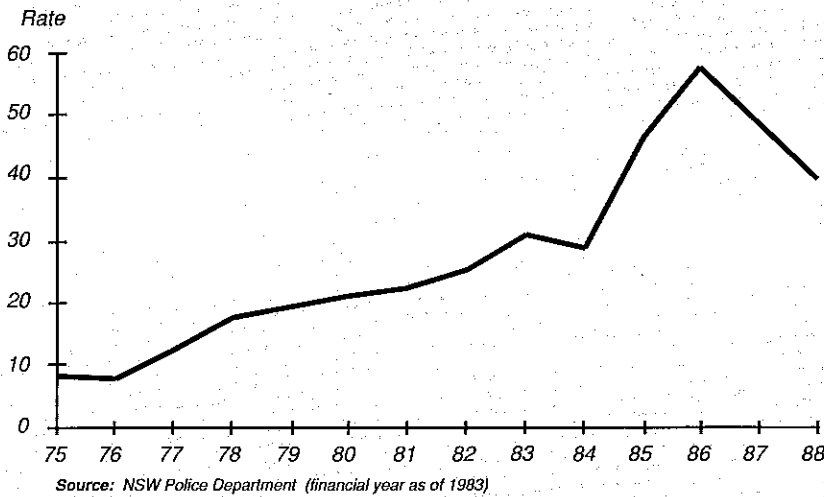
1. the apparent increase in the level of arson may reflect increased law enforcement activity and intensified involvement in the crime. For example, an Arson Squad was established in 1981 and its operational strength was increased from eight trained arson investigators in 1981 to nineteen in 1983. As of May 1987, the investigation of arson (and other crimes) became decentralised, and in each of the four regionalised Police Crime Units there are, at present, approximately six to ten detectives assigned full-time to the

Figure 1
Causes of fire incidents



Sources: NSW Standing Committee on Arson,
NSW Board of Fire Commissioners

Figure 2
Arson rate per 100,000 population



investigation of arson.

2. the subsequent increase in the number of suspicious fires investigated for arson, and a greater willingness to record a fire as arson, may contribute to the apparent rise in arson;
3. the development of new technologies that aid in the detection of arson has resulted in a higher proportion of fires being identified as arson rather than "cause unknown".

Despite discrepancies in the way that fires are defined, categorized and reported, both Police and Fire Brigade sources point to about 17% of fires being directly attributable to arson, with a further 30% containing some element of suspicion of arson.³ That is, almost one in every two fires in NSW is suspected of being deliberately lit.

THE COST OF ARSON IN NSW

An estimate of the cost of arson, described as "very conservative" by the NSW Standing Committee on Arson, which considers material damage only, is \$65 million annually.³ Of this total figure, vehicular arson alone involves losses of around \$20 million per annum.

The problem with estimating the cost of arson is that damage figures do not account for many incidental costs such as the loss of business, productivity, markets, or rises in insurance premiums. Furthermore, there are "hidden costs", many of which cannot be quantified or expressed in monetary terms, such as human suffering, or the morale destroying effect experienced by students and staff following a major school fire.

Consequently, there is no accurate estimate of the real cost of arson but the Insurance Council of Australia consider that direct property losses account for only 25% of the total cost of arson.⁷ If this view is accepted it means that arson costs the people of NSW approximately \$260 million annually. Expressed another way, in NSW the cost of arson is around \$48 per person each year.

THE ARSON STUDY

The Bureau of Crime Statistics and Research's arson study involved accessing the Police records of 1987/88 fire reports.

Of the 2,169 reported arsons, one in every four cases was selected to produce a random sample of 500 arson incidents. Each selected arson incident was then coded on a range of variables relating to the characteristics of the incident (i.e. the alleged facts) and the characteristics of alleged offenders.

In addition, similar information was collected for all 1987/88 'cleared' arson incidents, that is, for those arson offences which, at time of coding, involved a suspect becoming known to the police.

It was considered that an examination of the nature of 'cleared' arson incidents would provide valuable information on known offenders and the types of arson more likely to lead to the apprehension of offenders. Through the examination of a random sample of all arsons, the general pattern and nature of arson would, hopefully, be indicated.

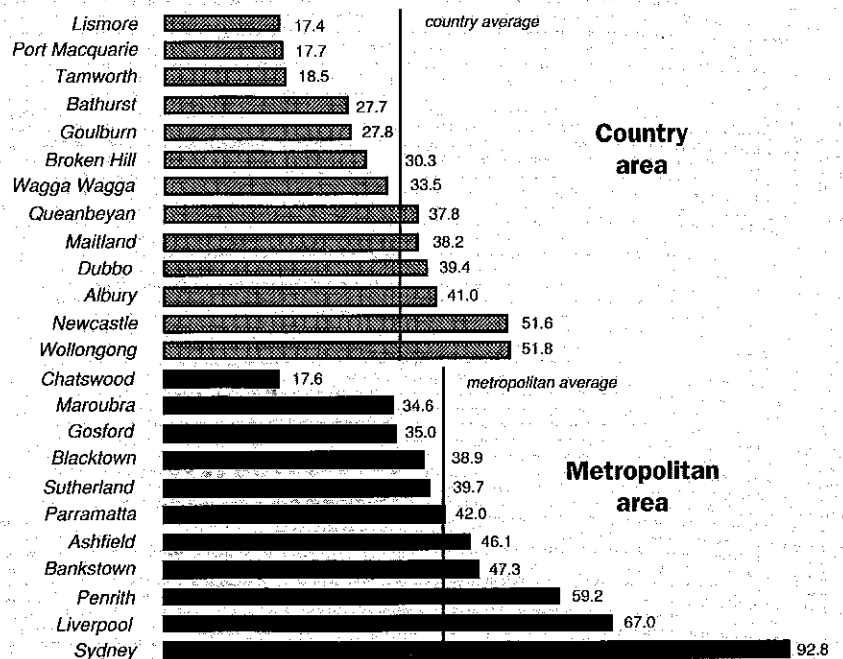
THE NATURE OF ARSON

Where do arsons occur?

Arson mostly occurs in urban areas. Police records indicate that two-thirds (66.9%) of the reported arsons for 1987/88 occurred in the Sydney Metropolitan Area. Furthermore, the rate of arson in the metropolitan area (42.5 offences per 100,000) is 22% higher than the country arson rate (34.7 offences per 100,000).⁵

The city 'hotspots' were the suburbs contained in the Penrith and Liverpool

Figure 3
NSW Police Districts: arson rates per 100,000 population



Police Districts where 25% of all metropolitan fires occurred. These districts also had two of the highest area rates for arson (59.2 and 67.0 offences per 100,000, respectively) only eclipsed by the Sydney (Central Business District, Darlinghurst, Kings Cross, Redfern) District which, with 92.8 offences per 100,000 persons, had twice the metropolitan arson rate. The Newcastle and Wollongong Police Districts contained 41% of all arsons in country NSW, with arson rates more consistent with city areas (51.6 and 51.8 offences per 100,000 persons, respectively) (see Figure 3).

What property is targeted?

Police statistics reveal annual changes in the incidence and rate of arson and also yearly variations in the type of property affected. In 1987/88 a 14% increase in arsons on living premises and a 9.6% decrease in the number of arsons on educational institutions was noted.⁵

In the Bureau's sample by far the most common form of arson involved vehicular fires. Over half the incidents (52.2%) involved the burning or attempted burning of motor vehicles. The next most common arson involved the lighting of fires in residential buildings (15.0%), followed by fires set to rural property (13.0%), and to educational institutions (11.4%) (Figure 4).

When do arsons occur?

Arson is committed when the risk of being discovered is at its smallest. Not surprisingly then, 84% of the sampled arson incidents occurred outside normal working hours, with 64% of fires occurring after 8 p.m. and before 4 a.m. Weekends (from 4 p.m. Friday to midnight Sunday) appear to provide the most opportunity for arson with 46% occurring during that period. Across the weekday period of Monday to Thursday it was found that arson was evenly distributed and at a lower rate than for weekends.

The incendiary method

Identifying the cause of a fire is often a difficult process requiring great expertise. Not only does fire tend to destroy evidence but firefighters in the course of combating a fire may unintentionally disturb or ruin evidence. In addition, some attending officers, inexperienced in fire investigation techniques, may not be able to hazard a guess as to the cause of a fire.

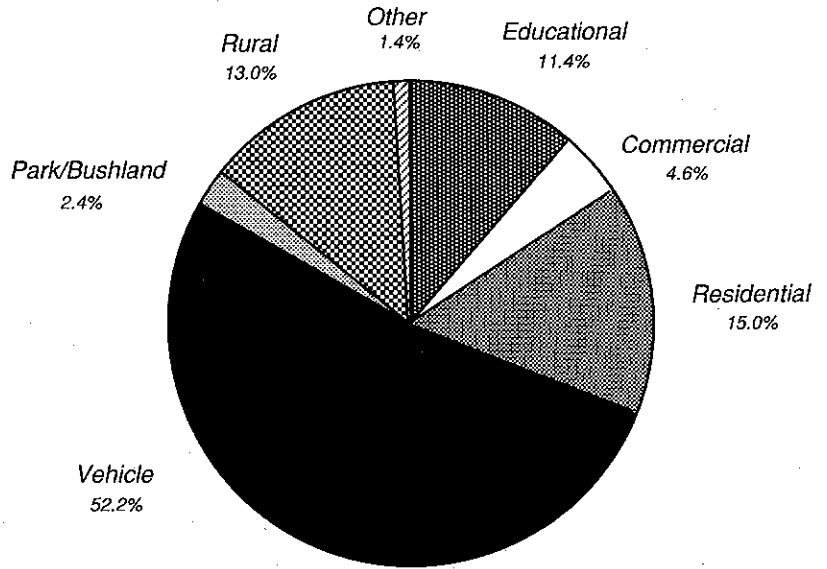
The incendiary method was identified in

63% of arsons sampled in this study. Half of these involved the use of accelerants, such as petrol or kerosene, although whether the flammable substances had been brought to the location by the arsonist or were found to be available on site was, generally, not known. Around 41% of arsons involved the arsonist igniting materials found to be available on site (e.g. setting alight curtains, papers,

which indicate a 7.5% clear-up rate for the last few years.⁵

The small proportion of offences cleared indicates the insidious nature of arson. Arson may well be "the easiest crime to commit" and "the most difficult crime" to prove. According to the Executive Secretary of the International Association of Arson "to detect and apprehend arsonists takes more technical expertise

Figure 4
Arson : Targeted property



Source: NSW Bureau of Crime Statistics and Research, 1987/88 Arson Study

books or furniture), with a further 8% of incidents involving the lighting of un-cleared rubbish or debris.

Number of persons injured

In only 1% of the sampled arsons was physical injury or death an aspect of the incident. Two arsons involved setting on fire a body in attempts to conceal homicide. Only one arson incident actually resulted in a death, and this was a case of suicide by burning. Of the twelve persons injured, six were the arsonists themselves, with three of the six attempting suicide by burning or asphyxiation. These data would appear to support the claim that "arson is not a major source of deaths or injury in either relative or absolute terms".³

What proportion of arson offences are cleared?

An offence is considered to be cleared if a suspect becomes known to the police. Of the 500 incidents only 7% were cleared (at time of coding) with only 5% of offences resulting in an arrest. These figures are consistent with Police statistics

than a homicide".¹

Only a proportion of all arsons will arouse suspicion, and only some of these for practical, legal and economic reasons will be investigated. Of those investigated only a fraction of cases will lead to successful prosecution, as to secure a conviction for the crime of maliciously destroying or damaging property by means of fire requires proof beyond reasonable doubt, and in many instances the fire has destroyed much of the evidence. In addition, for a small number of relatively "minor" arson incidents typically involving juveniles, legal action may not be taken, or a caution may be issued. Maliciously destroying or damaging property by means of fire, and attempts to do so, are considered serious offences under the Crimes Act 1900. For adults, sentences range from ten years if convicted of a charge of maliciously destroying or damaging property by means of fire (Section 195), to a maximum of life imprisonment if convicted of a charge of maliciously destroying or damaging property by means of fire in the intention of endangering life (Section 198). A person convicted of a charge of maliciously destroying or damaging

property by means of fire with a view to making a gain (for that person or another) may receive a sentence of up to fourteen years (Section 197). It should be noted that offences involving fire are considered a particularly serious form of criminal damage or destruction. The maximum penalty for damage or destruction by fire is, generally, double that for other forms of damage or destruction.

What types of arsons are cleared?

One would expect certain types of arson to have a smaller chance of being cleared than other types. Vehicles are often reported stolen in the context of an arson, and are typically found torched in remote or concealed areas; school arson almost invariably occurs outside normal school hours, often at weekends, and at night; rural arsons occur in sparsely populated areas. Such factors make these types of arson potentially more difficult to clear. This appears to be the case. While vehicular arson represents over 50% of all arsons, only 20% of all cleared arson incidents were of this type. The most frequently cleared type of arson involved residential property: 37% of all cleared cases were residential arsons, despite this type representing only 15% of all arsons. In addition, 18% of all cleared arsons were rural arsons and around 12% were school arsons.

Characteristics of alleged offenders

The 1987/88 cleared offences also yield valuable information on 168 alleged offenders. It should be noted, however, that because the clear-up rate is low it

may not be possible to generalise from the small number of apprehended alleged offenders to all arsonists, since those apprehended may not be a representative sample of all offenders.

A disproportionately high number (85%) of alleged offenders were male. In addition, females were completely unrepresented in vehicle arson. The majority (73%) of the twenty-six female arsonists engaged in residential and rural property arson. Aside from vehicle arson, males were heavily involved in commercial and residential arson.

Juveniles figured prominently in those apprehended for arson and represented 46% of all alleged offenders. The fifteen- to nineteen-year old age group contained over 33% of the total number of alleged offenders. Around 10% were aged ten to fourteen years. Interestingly, two alleged offenders were under the age of five at the time of the offence. Of all alleged school arsonists, 88% were below the age of nineteen. Also, half of all apprehended vehicle arsonists were juveniles. The twenty- to thirty-year old age group had the second highest representation with 30% of all alleged offenders.

Approximately 75% of the fifteen- to nineteen-year old alleged offenders were unemployed at the time of the offence. In addition, one-third of the adult offenders were unemployed. Overall, around 50% of all alleged offenders were unemployed while 23% were blue collar workers and 17% were students or children.

Racial appearance is possibly an unreliably recorded characteristic as it is based on the reporting officer's perception

of the appearance of the alleged offender. Furthermore, as mentioned earlier, the characteristics of those apprehended for arson may not be representative of all arsonists. However, it was recorded that 74% of alleged arsonists were white and 16% were classified as aborigine. The high proportion of offenders of aboriginal appearance in this crime appears to be an over-representation in relation to the small number of aborigines (1.5%) in the general population⁶, but is consistent with the findings of other NSW crime studies.^{8,9} Both persons of white and aboriginal appearance were implicated in all types of arson. The only other group figuring at a substantial level (6.5%) was those of mediterranean appearance, with the small number of alleged offenders in this group mainly suspected of commercial and residential arson.

One regularly debated issue concerns the arsonist's relationship to the targeted property. Is arson committed by strangers - irresponsible vandals performing wanton and senseless destruction? Or is arson performed by "the victim", or family or friends of the victim, possibly for reward or profit? It should be noted that the alleged offender's relationship to the targeted property is not always ascertained by the reporting officer, and consequently there may be an overstating of the apparent role played by "strangers" in arson. Nonetheless, the cleared offences provide interesting information on this aspect of the crime of arson.

Residential arson appears generally to be performed by owners (31%), or friends, family or tenants/residents of the owner (31%). In addition, neighbours accounted for 8% of residential arsons. "Strangers" were responsible for just over 20% of this type of arson with "locals" making up the remainder.

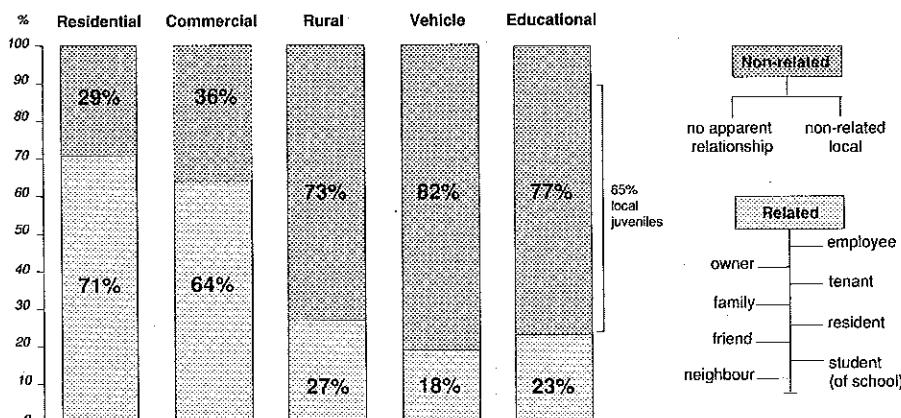
Commercial arson appears to be performed by owners (21%), friends or family (21%), or a tenant/resident (21%). The alleged offender was considered a stranger in 36% of commercial arsons.

Rural property arson was generally reported as being committed by strangers (69%), although 4% of the cleared incidents were started by an owner, 15% by a tenant/resident of the property, and 8% by an employee.

School arson was predominantly committed by a student (23%) or local juvenile (65%).

Vehicle arson appears to be committed largely by strangers (79%). However, around one-fifth of cases of vehicle arson

Figure 5
Alleged offender's relationship to targeted property (cleared offences)



Source: NSW Bureau of Crime Statistics and Research, 1987/88 Arson Study

implicated owners, or their families, friends or neighbours.

Figure 5 summarizes arson by the alleged offender's apparent relationship to the targeted property.

CONCLUSION

Arson is a crime that may be performed for financial gain or revenge, or some other complex motive. The orthodox view that arson is a senseless crime, another manifestation of wanton destruction or "wreckreation" performed by "faceless" vandals, is not accurate. Much arson is, in fact, arson-fraud performed by the "victim", or by persons known to the "victim", in order to liquidate unwanted and/or over-valued assets (typically, private motor vehicles, residential property, or commercial premises) by defrauding insurance companies. Many other arsons are committed by disgruntled employees, tenants or neighbours, or even family, relatives and "friends" of the owner, in order to exact revenge or retribution. Likewise, the high profile of school students and school-aged offenders in relation to school arson implies that revenge, spite and alienation may be similarly involved in many such incidents.

While the high number of established arsons and the possibly higher number of undetected arsons each year is concerning, it is encouraging to note that there appears to have been a downward trend in the incidence of reported arson in recent years in NSW. This apparent decline is probably the result of increased and intensified law enforcement activity in the area and a commitment from insurance companies to query and investigate suspicious insurance claims.^{3,10,11}

Postscript

Recently released NSW Police Statistics indicate that the rate of reported arsons for 1988/89 was 32.1 offences per 100,000 persons, a reduction of 17% on the 1987/88 arson rate. Thus, since 1985/86 there has been a steady decline in the number of reported arsons (which is at its lowest level since 1983/84), although the clear-up rate for arson offences remained relatively unchanged at below 8%.¹²

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