The Developing Threat from Arson – and How the Problem is Being Tackled

by C. Douglas Woodward*

1. Introduction

The crime of arson has become the major fire problem of the 1980s, supplanting accidental causes of fire such as electrical faults, hot processes and carelessness with cigarettes as the chief concern of safety managers, fire services and insurers.

Although “arson” includes fires which are begun to defraud insurers, we use the term in the much wider sense of any fire which is begun deliberately although excluding those fires started by children “playing with fire” in their own homes. Much arson is associated with vandalism and with petty crimes – theft in particular.

The insurer’s reaction to arson needs to be of two kinds: (1) to deal effectively with applications for insurance and with claims which may be of fraudulent intent; (2) to collaborate with others in combatting the more common types of arson which are associated with vandalism and other crimes.

To solve the arson problem will require a large and sustained effort on the part of many different bodies and organizations working together. Much work to this end is in hand.

2. The gathering storm

It is a curious fact that for a number of years governments, public authorities and insurers adopted an ostrich-like attitude to the gathering crime of arson. This was noticeably true in the United States where the arson problem was strongly manifesting itself during the 1960s and 1970s. The position there became so bad and the reaction of the authorities remained so negative that eventually local opinion was mustered in the form of community groups with local arson task forces being set up. It was only after these local initiatives had been taken that the government, public authorities and insurers began to take the necessary steps to fight arson.

In Europe the reluctance of the authorities to take action has been similar.

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As long ago as 1966 the Fire Protection Association published in its journal, as an early public warning on the subject, a "Survey into the increasing menace of arson" in which we quoted the chairman of a major UK insurance group as saying that nearly one fifth of the total amount of their fire claims resulted from property deliberately set on fire. The position throughout much of Europe has greatly deteriorated since then.

Worldwide it can be said that the cost of arson as a proportion of all fire costs is at least 15% and can be as high as 50% depending on the country. A report by Münchener Rückversicherungs-Gesellschaft (Munich Re Insurance Group) in 1982 stated that fire insurers throughout the world were having to devote between a quarter and a third of their total loss expenditure to pay for fire losses resulting from arson. The Gerling Institute of Cologne noted an "alarming increase" in the number of deliberately started fires as reflected in the criminal statistics of all industrial countries. Another important point about fires begun deliberately is that not only has the number of such fires increased enormously but the cost of such fires tends to be much higher than accidental fires. The reason for this is that deliberate fires are often started in more than one place, accelerants are used so that they take greater hold more quickly, and that arsonists frequently render the fire protection equipment inoperative.

3. UK experience

From the middle 1960s onwards the number of arson fires in the UK has been increasing at a rate of some 15 per cent a year. In the UK, in the case of all fires attended by fire brigades, the brigade has to complete a report which gives, inter alia, the known or suspected cause of fire. The latest figures show that about one third of all the fires attended by fire brigades in the UK are deliberate or possibly deliberate.

The Fire Protection Association uses insurance fire reports plus fire brigade reports as the basis for a continuing study of larger fires and our latest figures indicate that in the case of larger fires, where the cause can definitely be established, some 50 per cent are the result of deliberate ignition.

Criminal statistics also show that there has been a steep increase in arson. Comparatively few arsonists are actually proceeded against, indicating the difficulty for the police in assembling a sufficiently strong case. That about a third of those found guilty are sentenced to immediate custody has been taken to indicate that the courts take a relatively severe view of arson, on conviction. Others may feel that for two-thirds to get off very lightly does not help in deterring potential arsonists.

The other figure that emerges from the criminal statistics is the age of arsonists. A substantial proportion of offenders are in the 10–16 year-old age range.

4. Experience in other countries

Figures from the National Fire Protection Association record an enormous upswing from 5,600 "incendiary and suspicious" fires in the United States in 1951 (cost \$16 m) to 174,000 such fires in 1978 (cost \$1030 m).

The action taken by insurers and others, notably through the arson task forces set up in many cities and states, is showing encouraging signs of helping to stem the tide of arson attack in that country. Reports show that from 1982 to 1983 arson declined by 13% (source: FBI Uniform Crime Reports) or 5.4% (source: NFPA). The Insurance Commission for Arson Control says that the figures also suggest that arson is moving away from areas where it has been most powerfully countered, notably in the industrial east and mid-west, to new areas in the more rural south, south-west and west. Although, over a period of years, there has been a decline in arson, it nevertheless remains a major fire problem responsible for nearly half the property loss in non-domestic buildings. In 1986 arson accounted for a property loss of \$1.677 billion and was responsible for more than 700 deaths. Comparative figures are:

1977 \$1020 m.
1980 \$1760 m.
1984 \$1417 m.
1986 \$1677 m.

Netherlands. In the Netherlands a report on incendiarism published by the National Brandpreventie Instituut – NBPI – (the Dutch FPA) in 1982 stated that an increase in incendiarism was closely linked to “playing with fire” and hooliganism and ran parallel with a rise in the figures for criminal offences generally.

The Dutch statistics showed a rise in cases of incendiarism from 106 in 1963 to 1,600 in 1980. The report said that if fires the cause of which remained unknown were also taken into account, some 50% of all fires were caused by a pattern of abnormal conduct. Arson fires were estimated to have cost in 1978 some 45 m guilders, the average cost per fire being some 60,000 guilders.

The report recommended remedial measures including the organization of local, community, action. The latest information from Holland is that while there is greater awareness of arson within police, fire brigades and insurance circles arson fires have gradually increased to some 23% of the total with a cost of 190 m guilders.

Germany. In the German Federal Republic the Gerling Institute report, referred to above, stated that according to the statistics of the Federal Criminal Office, the number of arson fires there increased from 2,132 in 1960 to 9,408 in 1982. A working party has been set up under the aegis of the Vereinigung zur Förderung des Deutschen Brandschutzes – VFDB – (the German FPA) to deal with arson and the problems deriving from it.

Speaking at a joint conference of the Verband der Sachversicherer (German insurance association) and the VFDB, Dr. G. Lichtenwald of the VDS stated that Police Criminal Statistics for 1983 recorded more than 10,000 cases of arson, showing a four-fold increase in the frequency of this crime over the past 20 years. The position was worsening in 1984.

The amount of damage caused by arson fires was also alarming. The average arson fire loss in industrial premises over the years 1979–83 was approximately 127,000 DM which is 2.7 times the average loss in all fires in industrial premises. In 1984 there were 237 large fires

costing at least 1 m DM each in industrial premises and 61 can be attributed to arson, costing insurers 300 m DM. Nearly 60% were in storage areas.

In Germany (excluding fires with unknown causes) arson is the leading cause of fire, responsible for some 30% of all fires in insured industrial premises and 41% of the cost of such fires.

Dr. Lichtenwald comments that changed values and a change in attitudes towards the property of others must be regarded as largely responsible for the alarming growth in arson.

France. The Centre National de Prévention et de Protection – CNPP – (the French FPA) quotes statistics of the Police Judiciaire showing that in 1983 there were 1,025 cases of arson affecting public property and 6,921 cases affecting private property. In the period from 1972 to 1982 there was an increase of 119% in public property arson fires and an increase of 143% in private property arson fires. In the Paris Fire Brigade area there were 2,438 fires attributed to arson in 1984, out of a total of 16,842 fires. Police Criminal Statistics for 1986 put the number of arson cases at 9,600.

Sweden. The Svenska Brandforsvarsforeningen (the Swedish FPA) estimates that 25–30% of total fire costs in Sweden are caused by arson, amounting to a total of some 500–600 m SEK. They consider that one-third of fires with an unknown cause are also caused by arson.

Belgium. The Association Nationale pour la Protection contre l'Incendie – ANPI – (the Belgian FPA) states that according to insurance companies 30% of fires are caused by arson. According to the Brussels Fire Brigade, however, 60% of fires in Brussels are probably caused by arson.

Switzerland. Returns from 19 Cantons for 1985 put the number of arson fires as 5.2% of the total, and the cost of these fires as 21.2% of the total.

Spain. Insurers quote figures for cost of arson as between 30% and 50% of the total.

Figures from insurance sources indicate the following costs for arson for some other European countries: *Austria* – about 22% of total cost; *Finland* – 1,059 arson fires in 1985 – some 8% of insurance costs resulting from “malicious” fires and 18% from fires of unknown cause; *Norway* – arson 12% of losses, with “unknown” 30–40%, half of which are also believed to be arson.

5. Inadequacy of fire statistics

Fire statistics are inadequate to a lesser or greater degree in most countries. In many if not most countries there is no formalized system for the collection and analysis of figures relating to the incidence of fire. The cost of fire and the total number of fires that occur are often only guesswork. As to the *cause* of fires or the *occupancies* most affected, the information is generally very flimsy indeed.

We need better fire statistics in all countries and we should strive for them eventually to be on a uniform basis so that we can compare the statistics as between one country and another. In particular we must know the *causes* of fire and the *places* in which they start – otherwise we cannot take even the simplest remedial measures with any certainty of success. In the case of arson, because the causes or motives are so diverse, we need even more sophisticated information if ever we are to succeed in stopping the disease.

In CFPA Europe there are now only two countries which claim to have little of an arson problem: They are Denmark and Finland. However, the most recent annual reports of the Danish FPA lead me to suspect that all is not so well as my Danish friends think. Finland, I am not sure about. Perhaps their fire problems and their solutions to the problems may be sufficiently different from those of Western European countries to make arson less of a threat.

6. Motivation for arson

Arson can be categorized in different ways and the line between one kind of motivation and another is by no means hard. One can say that almost all cases of arson are the result of abnormal behaviour or even mental instability.

The various motives or impulses for deliberately setting fire to property – or people – are:

- Vandalism
- Revenge/spite
- Profit
- Mental instability/pyromania
- Concealment of another crime
- Violence/terrorism

In the United States it has long been held that arson-for-profit (e.g. to cheat insurers) has been the main motivation. Certainly this kind of arson is very prevalent in the United States and has led to a concerted attack by insurers there, both individually and collectively through the Insurance Committee for Arson Control.

Not all American sources, however, agree that profit is the major motive for arson. The American Law Enforcement Assistance Administration – LEAA – stated in 1979 that 42% of arson fires were the result of vandalism and only 14% were profit orientated. Certainly most European countries consider that vandalism is the prime motive.

In the UK there is little hard evidence of any growth in the number of arson cases to defraud insurers. The Home Office and the FPA are at one in blaming most of the arson increase on to fire associated with vandalism.

In the UK there has been a spate of fires associated with schools and other buildings easily accessible by children and the young. The 1986 figures from the USA underline again

that arson is a crime of the young, often the very young, who make up 40% of all arrests. One of every 16 persons arrested is under 10 years of age and one of every four under 15.

Arson is often associated with another crime, such as burglary, either to conceal the burglary or committed as part of the mindless destruction that is so often a feature of break-ins committed by the young.

Revenge or spite are frequently quoted as motives for arson – e.g. a disgruntled employee who feels he has been badly treated. The reasons given by people for committing arson verge on the bizarre. A man who set fire to a £1.5 m. Rubens painting in the Kunsthaus Museum, Zurich, said he did so to draw attention to environmental pollution.

7. Targets for the arsonist

It is clear from a study of fire reports that no building is immune to arson attack but some buildings are more vulnerable than others and require a greater degree of protection. The following details have been supplied by members of CFPA Europe.

Netherlands

Schools	34.8% of fires deliberate
Storage premises	21.6% of fires deliberate
30.8% of all arson fires occur in houses	
18.4% of all arson fires occur in cars/motorcycles	
6.9% of all arson fires occur in schools	
3.8% of all arson fires occur in shops	
3.0% of all arson fires occur in hotels/restaurants	

Sweden

Main targets for arson:

- Dwelling-houses
- Schools

Spain

Main targets:

- Factories

Belgium

Main targets:

- Factories
- Restaurants
- Dance-halls
- Cars

Finland

Main target (number of fires):

- Houses

Main target (according to damage):

- Factories

France

Main targets (1) Police Judiciaire:

– Vehicles	249 fires
– Industrial and commercial buildings	243 fires
– Hotels	75 fires
– Public buildings	71 fires

Main targets (2) Paris Fire Brigade:

– Total number of fires	16,842
– Number of arson fires	2,438
– Dwellings	1,072
– Buildings receiving the public	117
– Agriculture	96
– Industry	34
– Transport	429
– Storage premises	12

United Kingdom all fires (1986)

Main targets:

– Schools	972 arson	1,812 total	54%
– Entertainment	637 arson	1,485 total	43%
– Construction	401 arson	923 total	43%
– Shops	1,299 arson	4,560 total	28%
– Agriculture	541 arson	2,511 total	21%
– Hospitals	433 arson	2,223 total	19%
– Hotels	304 arson	1,825 total	17%

United Kingdom large arson fires (1984)

Main targets:

– Schools	74 fires	cost £11,892,000
– Warehouses	27 fires	cost £59,643,000

A study published by the UK Home Office in 1980 noted that the target buildings for fires associated with vandalism are isolated, unattended and with little or no security. However, quite a number of fires are started by those with a right to be on the premises, e.g. employees. The risk of malicious ignition is higher when children and young persons form a disproportionate number of those visiting the premises. Premises of all kinds are more likely to be targets outside schools hours, particularly during the hours of darkness and at week-ends.

There have been cases in a number of countries of arson committed against people rather than specifically against property. An example of this particularly unpleasant manifestation is a spate of arson attacks by young criminals in parts of London against the homes and businesses of Asian families.

A recent London report drew attention to the existence of a terrorist organization comprising “animal liberation” groups and anarchists. Among their activities are arson attacks on London department stores. They are said to have their own printing facilities with publications encouraging arson and violence generally. One publication is called “Flame Thrower” which urged the burning down of factories.

8. Some arson scenarios

Arson by a disgruntled employee – damage £2.6 million

A warehouseman employee of a firm which imported and held large stocks of basket/wickerwork furniture felt he was underpaid and unable to support his family. He decided to revenge himself and, after drinking heavily, he entered the warehouse late at night and set fire to waxed paper in which the goods were stored. A passer-by spotted the fire and called the brigade, but despite arriving on the scene only three minutes later the fire crews were unable to contain the blaze. Ninety per cent of the single storey premises and 20 per cent of an adjacent two-storey building were destroyed. The arsonist was seen running away. He was arrested shortly afterwards and during questioning he told police that his original intention was only to cause trouble by changing labels on items which were to be shown at an exhibition; it was a last-minute decision to start the fire.

Arson to cover a theft – damage £2 million

In this incident the transit warehouse of a shipping company was destroyed. The single-storey building was filled with an enormous range of goods, including boxed television sets, rubber boats, car tyres and cotton bales, stacked on pallets to a height of 5.5 metres – an ideal condition for rapid fire development and spread. The warehouse was fitted with an intruder alarm which was triggered in the early hours of the morning and the police were informed immediately via a direct line. Smoke was also seen at about the same time and the brigade was called. When police arrived about one minute later the warehouse was already ablaze. The flames quickly spread, destroying the building and its contents. Outside examination of the premises revealed a knotted line hanging from the roof down to ground level, and a number of tools associated with burglary were found in the roof gutter.

Arson to cover a theft – damage £48.8 million

One of the largest and most costly fires experienced in London in recent years resulted from a blaze which started in a bonded warehouse. The fire began in the racks of boxed electronic equipment and spread rapidly to racks containing 350 tonnes of cocoa butter and to 1,000 tonnes of baled rubber. The fire spread was particularly fast because of the melted cocoa butter; there was no compartmentation of the building. Over a period of months the warehouse had suffered persistent pilfering of video recorders and it seems probable that the fire had been started deliberately in an attempt to divert attention away from the missing equipment.

Arson at the time of an industrial dispute – damage £7 million

The attack was on a warehouse owned by a newspaper group supplying newsprint for its own press operations and for a number of other newspapers. At the time of the fire it contained in excess of 15,000 tonnes of paper in 1 metre diameter rolls. A dispute between the

newspaper group and the printers had led to lawless behaviour in the weeks prior to this event. At around 22.30 hours a small flame was seen which rapidly developed to involve the whole warehouse contents. Paper in roll form is more like a piece of hardwood than paper and is difficult to ignite but, once burning, the stack formation leads to very intense burning. From both the extremely rapid start of the fire and the evidence of witnesses, who apparently saw something flaming travelling through the air just before an initial soft explosion, it is clear that the fire was started deliberately.

Vandalism by children – damage £0.4 million

Four children aged 12 years and under climbed an external crane, gaining access to a gantry, in order to break into a general distribution warehouse. The children started fires in the first storey offices, using matches. By the time the first fire brigade appliance arrived, the fire had penetrated the roof and continued to spread rapidly because of the combustible nature of the contents.

Vandalism in a warehouse containing hazardous chemicals – damage £1 million

The warehouse involved in this fire contained at the time of the incident 2,000 tonnes of chemicals, including 25 tonnes of sodium chlorate. For many years there had been serious problems of vandalism in the area and, when premises became vacant, the scale of this activity increased. There is evidence that the original fire was started outside the building and that, earlier, persons had entered the warehouse. Two youths were later found guilty of burglary and arson. The fire spread was very fast due to the presence of flammable liquids and vapour, and was followed by a violent explosion caused by the sodium chlorate, a strong oxidizing agent.

Solitary fire setting for pleasure – damage £1.5 million

This fire occurred in a five-storey warehouse under conversion to private residential flats. The arsonist was apparently fascinated by fire and at 06.00 one morning lit a fire in a pile of wood shaving on the floor of the building. The fire spread and destroyed the whole of the wooden-floored building, and also extended to other properties nearby. Two weeks later the arsonist was arrested and admitted starting the blaze. He described how it made him feel good and gave him a feeling of happiness. He had had previous convictions for arson. A psychiatrist examined the arsonist and found that he was suffering from a psychopathic disorder.

Arson as a political protest became an obsession – damage US\$ 22 million

A seven-member arson ring, comprising police and firefighters, was formed to protest against tax-cutting measures, which would involve a loss of jobs. The group of seven however became obsessed with pyromania and regularly returned to the scene to watch the fires burn. During a period of two years they were involved in setting 269 fires, in which 282 people were injured. The fires were set randomly and throughout there was no evidence for profit found in any of the fires, despite thorough examination of insurance and sales records. It was only due to a demonstration of over-exuberance during a fire that one of the arson ring was caught.

9. The attack is under way

The encouraging news about arson is that it is at long last being recognized for the threat it is. The turning point was the symposium organized in Brussels (at the European Commission's conference centre) in November 1985 by the European Conference of Fire Protection Associations – CFPA Europe. This symposium, comprising high-level representatives from 14 countries, served for the first time to bring arson to the fore as an issue of importance to governments, police, fire services, insurers and other national bodies. While undoubtedly the solution will have to be found nationally in each country, the European Commission venue, and the authority of CFPA Europe, had given arson a focus of attention at European level.

Stemming from the symposium we have set in hand a comprehensive programme of counter measures against arson. To put the programme into action we established a CFPA Europe working party comprising representatives of UK, France, Germany, Sweden, Switzerland, Netherlands and Belgium. The working party has met four times and has shared out some twenty tasks for action. These tasks are running concurrently and most will have been completed around the time this paper is published. The CFPA Europe programme of work covers the following subjects:

- Security as part of overall management responsibility for fire safety
- Assessing the arson risk
- Arson investigation
 - Guide to arson investigation
 - How different countries undertake fire investigation nationally
 - Role of forensic science
 - Analytical techniques
- Training and arson investigators
 - Courses provided in different countries
 - Training material (e.g. films and documentation)
 - A model syllabus
- Guide to fire protection equipment for control of arson
- Guide to security measures against arson
- Environmental measures against arson (including building design)
- Publicity and education
- Community action and local initiatives
- Motivation of arsonists
- Arson bibliography

CFPA Europe has also urged that each member country should set up its own arson working group to deal with the particular tasks allocated to that country, to make an input into the total European programme and, of course, to consider matters of particular importance to that country, and several such working parties have been set up.

The particular result of the European work will be the availability of a CFPA “Arson Dossier” which will comprise guidance material on the subjects outlined above for use by the government, police, fire service, insurers and other responsible bodies in each of the member countries. We hope that this arson dossier will be introduced at a second European symposium which will again have the support of the European Commission.

10. Contents of the “Arson Dossier”

Let me now examine what the dossier will contain and how the work is being carried out in the various national fire protection associations.

Security. In the short term the best defence against arson attack – from outside – is to strengthen the security measures of any building and it has been the task for our German colleagues to put forward a guide on the various measures to be taken under this heading. The French have produced related guidelines on the role of management in implementing a security programme and how security needs to be considered as part of management’s overall responsibility for maintaining the continuity of the business.

Assessing the risk. For any organization, before any steps are taken, it is sensible to consider the risk from arson attack, the relative degrees of risk of different parts of the premises, and the priorities attaching to the particular risk. The Swiss and Germans have prepared a guide on how to measure and assess risk of arson.

Fire protection equipment. Arson is one cause of fire and assuming a fire has started – from whatever cause – it is desirable that there should be means for detecting the fire and for its effective extinguishment. Thus, against an arson fire, as against any fire, the management of a building will need to select appropriate automatic equipment – detectors and/or sprinklers – for control of the risk. However, in the case of arson fires it is possible that something more than the normal is required – bearing in mind that arson fires are often begun in several places at the same time and that the equipment itself needs protection against the arsonist. The French have prepared guidelines on these matters.

Environmental measures. We know that it is possible through the design of buildings to improve their defence against intruders in general. The objective is to make it less easy for intruders to gain access. Walls which it is easy to climb over, flat roofs from which access can easily be obtained to the interior of the building, dark corners where the intruder can work undisturbed – these are clearly features to avoid or to modify. Architects and building surveyors have an important role to play in this aspect of defence against arson. There are other environmental measures to combat arson. For example, we know that steps can be taken on housing estates to make them less prone to vandalism and arson. We know that derelict buildings invite arson attack and should be made secure against people breaking into them and setting them on fire. To leave waste and refuse near any building is to invite attention by arsonists/vandals. The Swiss are engaged on this task.

Community action. The local task forces established in the United States have been effective in achieving a substantial reduction in arson in areas where they operate. Our Swedish colleagues have produced guidance on how we in Europe can undertake similar local initiatives.

Motivation. Sweden has also produced in-depth information on arson psychology, what motivates people to start fires, and on helping the “victims” to defend themselves. In the long-term this is a very important study because eventually we need to apply appropriate treatment to each of the categories of arsonist.

Measures by insurers. In all our countries the insurance organizations (led by the CEA) need to consider their own particular role. This role is two-fold. There is the general responsibility for insurers to collaborate with others (e.g. fire service and police) in combatting all forms of arson. Then there is the particular responsibility that insurers should be on the watch for cases of arson for profit, notably arson to defraud insurers. The dossier will contain a resume of what is already being done or planned in this area.

Investigation. It is a sad fact that few arsonists are ever caught and punished. To reduce the amount of arson in Europe we must improve our techniques for investigation. The system for investigating fires varies from one country to another and so one cannot lay down a single set of rules which all countries can apply. But here are some guidelines and these form the basis of documentation which the UK is producing for the dossier.

First there has to be a national system for investigating fires.

Second, whichever agency plays the primary role, there needs to be a considerable degree of collaboration as between fire brigades and police. I would also recommend insurance involvement as far as is possible.

The investigating agency will need the help of trained (forensic) scientists in their task.

11. Some UK developments in fire investigation

The senior fire officer present at a fire will attempt to establish the cause of the fire and in the case of a suspected deliberate fire will provide the police with any information and evidence which is available. It is the responsibility of the police to collate the information, to collect and maintain evidence, to preserve the scene of the fire and to decide whether to call in the forensic science service.

In the case of all fires attended by the fire brigade, a form is completed ("FDR 1") which includes information as to the cause of the fire. Fire may be described as "malicious" or as "doubtful" if deliberate ignition is suspected but not fully established.

All UK fire brigades now have a system for fire investigation. All have a pool of trained investigators although few have teams working full-time on this. Training is provided at the Fire Service College and within brigades.

In many areas the fire investigation teams include a police officer as well as fire officers.

Fire investigation teams may be called upon when the cause of fire is suspected to be arson, if there are deaths, if the fire is large or when the cause of fire is "doubtful". In most brigades the investigating officers are issued with equipment to help them in their tasks (e.g. cameras, recorders, video equipment).

If the fire officer suspects arson, the police are informed and a “scene of crime officer” attends. If arson is then positively established (perhaps after consultation with the forensic science service) the police (Criminal Investigation Department) commence their enquiries.

Recommendations for future development of UK system:

A hitherto unpublished Government report has recommended:

- At least one full-time officer in each fire brigade to be responsible for fire investigation. Others to act as fire investigation officers in addition to other duties.
- There should be a national scheme to provide a recognized qualification for fire investigation officers.
- The help of trained (forensic) scientists should be available, on request, to fire brigades.
- Better liaison and communication about fire investigation/detection of arson between fire brigades, police and the public.
- A national newsletter or journal on fire investigation.

Training. Some of the above recommendations cover the need for improved training. The Fire Service College (Moreton-in-Marsh) runs a one-week course on fire investigation which is open to fire officers and police officers. At the top end of the scale we have the officers in the government’s forensic science service who are qualified scientists. A limited number of forensic scientists have specialist knowledge of fire investigation techniques. The government report referred to above recommends a substantial increase in training facilities for fire officers and police and says there could be scope for a national examination (as in the USA) for fire officers to obtain a recognized qualification in fire investigation. Such an examination, it is suggested, could be organized by the Fire Service College or by the FPA.

Improving management awareness. While the task of investigating suspicious fires must rest with fire service/police, the management of industrial, commercial and public buildings also have some responsibility in this field. Managements should ensure that all fires which occur on their premises are investigated so that suitable action is taken to avoid a recurrence. In the case of small fires which may be deliberate, such investigation may well produce evidence which management is able to present to the police and thus avoid a more serious arson fire in the future.

To this end, part of our CFPA Europe dossier will contain guidance to management on how to carry out their own fire investigation. We also recommend the organization of short training courses on fire investigation for safety staff in industry/commerce.

12. Insurers' action

Insurers individually as companies, collectively through their national associations, and on a European basis through the Comité Européen des Assurances (CEA), are now actively engaged in measures to combat arson.

At the 1988 meeting of the CEA's sub-committee 38A dealing with arson, reports were given by national representatives of the various ways in which the insurance organizations in different countries were tackling the problem. The meeting encompassed a symposium on methods of sampling and analysis to detect arson fires.

It is particularly interesting to record that in a number of countries insurers have established, or are in the course of establishing, central data banks for the identification of doubtful claims at an early stage.

13. Conclusion

From what I have said in this paper I hope it will be apparent that a determined onslaught is now being made on the vandals, the petty criminals, the psychopaths who deliberately set fire to buildings and the people who may be inside them for excitement, for gain or to cover up the traces of criminal activities. It is a battle that has to be won. It needs to be fought wholeheartedly but circumspectly. Too much of the wrong kind of publicity can indeed promote yet more cases of arson. Publicity has to be of the right kind telling specialists, such as managers in industry, how better to protect the buildings and the people for which they are responsible, telling would-be fire-raisers that they are likely to be caught and punished. At this particular moment, as the statistics indicate, we have not yet arrested the mounting spiral of arson losses. My own feeling, based on a good many years' experience in the fire world, is that some success in our developing joint campaign may be expected within the next year or two.