

# FIREPOINT



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# Firepoint

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**FIREPOINT: INTERNATIONAL WINNER OF THE IAAI  
2001/2002 AWARD FOR THE OUTSTANDING PUBLICATION  
OF A CHAPTER NEWSLETTER OR MAGAZINE.**

**Reminder:**

**If you have not yet paid your annual membership fee,  
you can do so now.**

**EDITORIAL**

The Western Australian Summer Forensic Symposium will be held in Perth on 12-16 January, 2004. For information contact Clive Cooke on 9346 3000.

The QAFI will be holding a "Motor Vehicle and Machinery Fire Investigation Conference on July 16 and 17, 2004 in Brisbane. If you are interested in submitting a paper, contact Gary Nash on 07 3352 6077.

The IAAI was very saddened by the death of Dick Johnson, described in "Fire and Arson Investigator" as "the most loyal and supportive member of IAAI in the entire organization". A generous benefactor and a great friend, he will be missed by all who knew him.

*Wal Stern*



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### PRESIDENTS REPORT

As 2003 draws to a close, I would like to thank all Members of the Association for their efforts over the last 12 months. 2003 has been a significant year with the staging of a number of key educational events.

The first event was held in March at the NSW Fire Brigade's Training Facility at Alexandria where guest speaker, Mr David Smith from the IAAI held an educational evening. The second event was held on the 1st May at the Ryde-Eastwood Leagues Club where fellow Committee Members Mr Ross Brogan and Mr Wal Stern presented a video training night.

The third event held on the 26 June (also at the Ryde-Eastwood Leagues Club) was a briefing session I conducted on the

bushfires that affected NSW during the 2001/2002 fire season and the fourth event, being the bi-annual Conference in Sydney on the 7-8 August, involved key speakers from overseas, interstate and NSW. Finalising this year's events was a presentation from our newly elected Committee Member Mr Jim Munday on the 16 October 2003 regarding the investigation of fires in Antarctica and training standards employed in the United Kingdom for Fire Investigators.

These achievements have been of great benefit to all Members of the Association as I believe our aim is to provide as many opportunities as possible for educational / training sessions on the field of fire investigation. Your Committee is already planning a number of major training events for 2004. I ask that all

Association Members support the hard work put in by your Committee by attending these sessions wherever possible. I look forward to meeting up with many of you in 2004 at these events.

Additionally, I again remind our new Members to become involved in your Association by offering suggestions to any Committee Member on areas you believe we need to cover in future presentations.

Finally I would like to wish all Members of NSW Association of Fire Investigators a Happy Christmas and a Safe and Prosperous New Year.

Yours Sincerely,

*"Providing Fire Investigation Education...the Path to Prevention"*

## Welcome

The Queensland Chapter has held two very successful functions/training seminars since our last report and we thank everyone who attended the August members meeting and the Childers Symposium for their support.

A review of the Childers Symposium will be published in the next report.

## Changing the Rules on Experts

Article written by – Quentin Lanyon-Owen, Hunt & Hunt Lawyers

### Changing the rules on experts

The Supreme Court Rules Committee has issued a final draft for comment of the Expert Evidence Rules which are to be incorporated in the *Uniform Civil Procedure Rules* (UCPR) in an attempt to simplify the issues surrounding expert evidence and deal with the ever-increasing delay and cost involved in getting a matter to trial.

In reality, litigation is very much dependent on which party's expert is believed by the court and this becomes even more evident when a number of experts from the same field deliver vastly different findings that are both logically and expertly justified in their opinion.

As each party will often obtain evidence from more than one expert, a huge delay is caused by the excessive amount of time spent gathering evidence and trying to convince the court which evidence is more 'correct'.

It is hoped that once the Rules have been finalised and incorporated into the UCPR they will help to avoid any unnecessary costs incurred in retaining more than one expert within the same field in relation to the same issue.

### The new rules – appointing an expert

As declared by the new Rules the duty of an expert witness is to assist the court, overriding all obligations the expert may have to any party to the proceedings or to any person paying them a fee and aims to ensure, where possible, expert evidence to be given on a particular issue is delivered by a single expert as agreed upon by both parties.

When parties are unable to agree on a particular expert, either party may bring an application to have the court appoint a single expert. Additionally, the court may appoint an expert to prepare a report on a substantial issue in the proceedings. However the Rules specifically note that the court will still provide for those cases where evidence from more than one expert is needed to ensure a fair trial.

If a single expert is to be chosen, parties must agree in writing on: the time within which the report is to be provided, the relevant who which party will be liable for the expert's fees.

Where the court appoints an expert, the court may: direct parties to provide the expert with certain information, or direct the expert in relation to an inspection or examination.

The Rules also allow for an expert to apply to the court for directions, further to those already received from the parties, to help facilitate the preparation of the report. This application must be served on all parties and on any other person as directed by the court. On hearing of the application the court may give directions regarding an inspection, examination, or experiment to be carried out by the expert and in some circumstances may direct experts retained by the parties to confer for the purpose of identifying issues on which they agree and disagree, with the aim of reaching consensus at some level.

### The expert's report

The Rules specify that each expert report must contain certain information for it to be deemed valid. This includes the expert's qualifications, the material facts, the basis on which the report was prepared and any

references to literature or other material relied upon. The report must be in writing, addressed to the court and signed by the expert.

In relation to any inspection, examination or experiment conducted, the report must include a description of what was undertaken, whether it was undertaken by the expert or under the expert's supervision, the names and qualifications of any other person involved, and the result. Where there is a range of opinions evident throughout the report, the report must then also include a summary of these and reasons supporting the experts adopted opinion.

As well as including a summary of the conclusions reached, the report must also confirm that:

1. the factual matters stated in the report are true so far as the expert knows;
2. the opinion stated in the report is genuinely held by the expert;
3. the expert understands his or her overriding duty to the court and the expert has complied with that duty.

If an expert changes, in a material way, an opinion in a report which has been disclosed, the expert must as soon as practicable, provide a supplementary report to all the parties stating the change and the supporting reasons behind it.

Currently, the Rules are only in draft form and submissions have been made to the committee in relation to them. A final version of the Expert Evidence Rules is expected to be released in the near future.

## Editorial

By – **Adrian Barry**, Acting Manager – Fire Investigation Research Unit, QFRS

We all have picked up the newspaper at one time or another and read the headlines "School Destroyed by Fire" or "School Arson Costs Exceed xxx million" or "Arson attack costs Jobs", the average person sighs at such

a waste, thinks "they should do something" and reads on.

Instead of sighing wistfully, Mr or Mrs average should be shouting from the rooftops "this is my taxes, insurance premiums, rates, infrastructure and heritage that these criminals are burning and I deserve to get mad about it and make sure they are going to pay for this".

Conservative figures over the last 4 years have indicated that of 125 school fires reported in Queensland, the loss is nearly \$13,000,000, this equates to arson in general which is growing in Queensland on an average of 6% PA per 10,000 population.

The incidence of arson Australia Wide is also an enormous problem where an identified cause has been responsible for losses of \$123,000,000 last financial year as reported by the states contributing to the data QLD, WA, SA, VIC, TAS and ACT.

Arson is legally considered to be a property offence and one of the main reasons for the poor arson conviction rate is that it is treated as a "soft" crime, the average person is not aware of the financial and human impact caused by these acts. In 1999 – 2000, there were 1,688 arsons reported to Qld police with a total of 224 adult and 51 juvenile offenders being brought to court. One of the main reasons for the poor conviction rate is that (1) arson is an easy crime to commit and (2) is extremely difficult to prove.

So, let's consider the simplest of scenarios. A householder awakes one morning and discovers that a fire has been set in their wheelie bin causing enough damage to render the bin unusable. If the fire service has responded (we won't even consider the cost of a fire appliance attending), the official record will read "outside rubbish fire" and nationally is not recorded as any monetary loss. But if we look from the council's point of view, there is the cost of replacing the bin (up to \$78.00), collecting the damaged bin and rubbish and the administrative work necessary to organise all of this. So, where is the money coming from to carry out this service?

If we look at the rubbish bin problem from a national perspective, then ratepayers across Australia must be bearing an incredible burden just from some scumbag lighting up the odd bin for a laugh.

How do we combat this crime? Ensure that it is recognised as a serious crime where the maximum penalty can be up to 16 years in prison, educate the public that arson is not a victimless prank, ensure the judicial system is aware of the community attitude that we will not to tolerate these acts and to be prepared to maximise efforts to bring offenders to justice regardless of the cost.

So, what should we do with arsonists? Treat them as such a serious crime deserves, throw the book at those who deserve it and help those that need it.

## Membership

QAFI Membership renewals will be distributed in early December for payment by the end of January 2004. If you do not receive your membership renewal notice, please contact [admin\\_officer@qafi.asn.au](mailto:admin_officer@qafi.asn.au)

It would be appreciated if members who have changed their e-mail address over the past twelve months and not advised us could do so as soon as possible. E-mail is our primary stream of communicating with members and also for distributing meeting, seminar and conference invitations and registration forms.

Not sure if you have advise your current e-mail address? Send a quick e-mail to Julianne anyway. [admin\\_officer@qafi.asn.au](mailto:admin_officer@qafi.asn.au)

## Diary Dates

### Wednesday 3<sup>rd</sup> December 2003

#### FPA (Qld Div) Conference – "Whose Fault Is It – The Changing Risks in Buildings"

A forum to promote awareness of fire and management of risks over the life of the facility.

Venue – The Greek Club, Brisbane

For further details contact FPA Australia direct on (03) 9890 1544

### 16<sup>th</sup> & 17<sup>th</sup> July 2004

#### 2004 QAFI Conference / Major Project

The conference theme for the 2004 Conference / Major Project will be "Commercial Motor & Machinery Fire Investigation".

Once again it will be a two day conference encompassing theory sessions on day 1 and practical demonstrations (*must have a burn*) and static displays on day 2. The QFRS – Training Academy at Whyte Island has been booked for day 2.

The committee has called for expressions of interest – speakers & case studies. Expressions of interest – exhibitors, sponsors etc will be issued shortly. We will also need to secure some heavy machinery/vehicles for the project. If you are able to assist in this area, please do not hesitate to contact Gary Nash on 3352 6077 or email [gary@forensicservices.com.au](mailto:gary@forensicservices.com.au)

### 18-23 April 2004

#### 55<sup>th</sup> IAAI Annual General Meeting & Conference

The registration form and Agenda has been released and can be downloaded from the IAAI web site [www.firearson.com](http://www.firearson.com) The AGM & Conference is being held in St. Louis, Missouri, USA.

## **VICTORIAN CHAPTER REPORT**

### ***Apology***

Due to circumstances and oversights, the Victorian Chapter became unregistered and as such has not been able to conduct any meetings or training sessions. It was unfortunately a very protracted affair. The resolution of this situation is now behind us and the Association is now back on track.

Due to the inactiveness and these problems there was no article in the last issue of "Firepoint". It should be noted that the records and accounts for the Association were able to be recalled and reminds everyone involved in any group of this kind of the need to keep the paperwork up to date and available.

### ***AGM***

Although this article is written prior to the AGM to be held on Saturday 29<sup>th</sup> November 2003 (better late than never) our thanks to John Kelleher who will be presenting a session on the Bali Bombing, he being part of the International Crime Scene Investigation Team. More detail on this in the next issue.

### ***Membership***

The membership of the chapter still remains at 177 members, and we wish to thank members for their support, and continued support in the future. A reminder for those who did not attend the AGM fees for the year 2003/2004 that have

been reduced for a once only \$10.00, and returning to \$30.00 for the period 2004/2005 which will be due 1<sup>st</sup> July 2004. Remember this comes around very quickly. Reminders will be forwarded to members.

### ***Merchandising***

We still have Polo Shirts for \$25.00, caps \$12.00 and other items for sale. Orders can be made by contacting Bob Hetherington thru the FIA Office on (03) 9420 3884 or email [bhetherington@mfffb.vic.gov.au](mailto:bhetherington@mfffb.vic.gov.au) Some items may be good as Xmas presents.

### ***Website***

The Website is still running at [www.vafi.org](http://www.vafi.org) with the compliments of the Secretary Trevor Pillinger and any ideas or articles would be appreciated and can be forwarded to Trevor at [tpillinger@investigatortraining.org](mailto:tpillinger@investigatortraining.org).

### ***Season Greetings***

The Xmas season approaches again and also the bushfire season. From the Chapter Committee, all the best for the festive season and safe travelling. We hope the fire storms from overseas fires are not repeated in Australia and that the incidents of deliberately lite fires are at a minimum for our fire season.



**Application for Membership**  
**Association of Fire Investigators**  
**(A Chapter of the International Association of Arson Investigators)**

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I hereby apply for membership of the Association of Fire Investigators in the State of .....  
..... in accordance with its constitution and by-laws, and agree to be bound thereby.

I attach the amount of \$..... in payment of annual dues.

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1. Name in Full
2. Address for Mail
3. Position Held (e.g. police or fire brigade officer, lawyer, investigator, assessor)
4. Company/Agency
5. Telephone
6. Mobile
7. Fax No.
8. E-mail Address
9. Signature
10. Name of Member Recommending you
11. Telephone No. of Member . . . . .
12. Address or E-mail No. of Member
13. Signature of Recommending Member

Give your completed form with your payment to any committee member of the Association, or mail it to the appropriate postal address, as shown on page 3. This page lists contact names and numbers if you have any inquiries.

# **AN OVERVIEW OF FORENSIC DOCUMENT EXAMINATION**

*A paper presented by Paul Westwood, OAM, LL.B, FSS DIP (U.K.), ASFDE  
Director and Chief Document Examiner, Forensic Document Services  
to the NSW AFI Conference in Sydney on 8 August 2003.*

## **INTRODUCTION**

Document examination embraces every aspect of determining the genuineness or provenance of a document of interest to an enquirer and which may be of relevance in actual or anticipated litigation. Many lawyers and investigators do not fully appreciate the potential of this forensic discipline in assisting them to bring cases to a successful and perhaps timely conclusion.

The purpose of this article is as follows: to assist legal practitioners in deciding whether they have a case which could be assisted by timely engagement of a document examiner; to give guidance on finding a qualified document examiner; to indicate what the document examiner requires of the lawyer by way of documentation and relevant background instructions; to give an indication of the likely costs of engaging a document examiner; and to discuss new and ongoing developments of electronic signature and handwriting recognition which are of direct relevance to improving security in areas such as the burgeoning commercial use of the internet.

## **THE WORK OF THE DOCUMENT EXAMINER**

The greater part of the work of the document examiner relates to the comparative examination of signatures and handwriting. Other aspects of the work include the following:

- developing latent writing impressions in documents caused by the act of writing on an overlying sheet of paper;
- determining the sequence of impressions and actual writing on the subject document;
- determination of the relative and, occasionally, absolute time when entries were made;
- determining the likely sequence of line crossings;
- detection of alterations in documents, including page substitutions;
- decipherment of obliterated and erased writings;
- determining the source of anonymous letters, extortion notes, etc.;
- non-destructive examination and comparison of inks and papers using photo-analytical methods;
- chemical analysis of inks for the purpose of dye comparisons;
- determining the source and date of documents produced by various typewriter, printing and reproduction (eg. photocopy) methods; and
- decipherment of typewriter ribbons and the possible matching of specific entries to a suspect typewriter ribbon.

The document examiner should also be aware of related forensic disciplines, such as fingerprint examination, chemical analysis, DNA profiling, computer forensics, have some knowledge of signature and handwriting recognition software and the correct use of statistics. Finally, the document examiner should be able to refer work where appropriate to recognised experts in such other fields.

The cases that give rise to the demand for the services of a document examiner are many and varied and are not restricted to major commercial disputes and criminal trials.

The following summaries demonstrate the range and scope of the forensic application of document examination.

The administration of Estates often gives rise to allegations of forgery in respect of Wills and other documents expressing testamentary intention. As well as cases involving all types of non-genuine signatures on such documents, the authors have also examined many documents where it has been established that the disputed signature is genuine but the document is fraudulent. Such fraudulent documents have been based on signed blank pieces of paper intended for some other purpose, receipts, invoices, slips of paper bearing a name and address, and typed letters with the signature block well displaced from the text of the letter. Occasionally attempts are made to simulate both the handwriting and signature of a deceased person to produce a holographic Will.

In a recent case, a dispute involved a quarter of a billion dollars worth of transactions on over a hundred documents, each containing a very simple signature in the same name. Having compared these signatures with a large sample of undisputed signatures and despite the inherent extreme simplicity of the subject signatures it was possible to conclude that the questioned signatures were very probably the product of some person attempting to simulate the form of the genuine signature. The undisputed signatures exhibited a fluent writing movement and a wide range of natural variation whereas the questioned signatures had the appearance of having been drawn and were all too similar to one another.

From time to time tertiary institutions have called for assistance in determining whether one student has substituted for another student in an examination. The provision of writing samples based on assignments submitted by the students concerned has led to cheating being revealed on some occasions whilst on other occasions it has been possible to lift suspicion from a particular student.

Issues frequently arise regarding the preparation of diary notes and other records such as patient history cards, journal entries, file notes, records of interview, and so on. A detailed study of the questioned entries using microscopy, photo-analytical techniques and electrostatic development ("ESDA") of latent writing impressions often shows that suspect entries could not have been made as part of an ongoing contemporaneous record. It is also sometimes possible to conclude that a particular entry could not have been made at the time claimed because of the observed physical interaction of other writings in the document.

Documents are often suspected of being the subject of meticulous fraudulent addition and/or deletion (chemical or mechanical erasure). On other occasions some potentially important details on a document may have been heavily obliterated. Despite the fact that the human eye may not detect the fraudulent manipulation of a document or be able to see through an obliterating medium, infrared luminescence and reflected infrared techniques can more often than not reveal the original details of the document.

The need to source the origins of anonymous letters, notes and similar documents often arises in both domestic and commercial settings. Cases such as these have often been successfully resolved by handwriting comparison with a suspect's writing and/or by ESDA detection of latent writing impressions in the anonymous document, caused by the act of writing on an overlying document, which might provide evidence of the perpetrator.

The two main areas of work of the forensic document examiner will now be considered in more detail.

## **HANDWRITING AND SIGNATURE EXAMINATIONS**

To maximise the evidential potential of a document it is very important to submit the original for examination wherever this is possible. However, useful findings, albeit usually qualified, are still possible with reproductions. Signatures and/or handwriting submitted by way of comparison material should also be in original form and should ideally consist of two classes of documents:

- samples written during the normal course of business, some of which should be contemporaneous with the questioned material; and
- samples written specifically for the purposes of comparison.

Signatures are the most frequent type of questioned writing and hence are discussed in some detail below. A person's handwriting also frequently attracts attention in litigation. Questions arise as to whether entries in various business records, diaries, forms, letters, notes, minutes, etc were made by a particular person or whether multiple entries in certain records were made by one or more people.

For both signature and handwriting questions, the document examiner makes a detailed examination of the questioned and known signatures or handwriting with the aid of hand magnifiers and microscopes in order to ascertain, amongst other parameters, the precise method of construction of letter formations or signature components, their variations, how various letters relate to one another and the fluency of the writing. Following a detailed examination of all of the writings, the examiner can usually reach a conclusion on the likelihood that the questioned and known writings/signatures were written by the one person. That degree of subjective probability may be so high, or occasionally so low, that the document examiner is able to arrive at a definite conclusion.

Qualified and indeterminate findings may be of assistance in determining how best to proceed with an investigation and can be of assistance to the courts in those cases where it is combined (by the Court) with other evidence.

## **RESULTS OF SIGNATURE EXAMINATIONS**

If an original signature is a simulation of the genuine signature style, it must have been produced by one of the following methods:

- direct freehand copying of a genuine signature;
- freehand copying of a genuine signature from memory;
- direct or indirect tracing of a genuine signature.

Where the signature is not a simulation, further scenarios which must be considered are:

- a person writing a normal signature or modifying the signature and later disavowing that signature;

- a freehand production with no attempt to replicate the genuine signature;
- chance coincidence of form in signatures of two people (rare but possible) .

It should be noted that a finding that a questioned signature is genuine does not necessarily mean that the document upon which it appears is genuine.

### **Freehand Simulation of a Genuine Signature**

The task of producing a high quality freehand simulation is very difficult as the forger has to possess a thorough understanding of both the gross and subtle characteristics of the signature which is being copied, be able to reproduce that signature with a degree of fluency consistent with the genuine signature and be able to suppress his/her own writing characteristics whilst attempting to replicate those of the genuine signature.

### **Tracing and Image Transfer**

Forgers frequently resort to direct or indirect tracing to minimise the risk of introducing some gross error in form into the signature or because of an inability to reproduce a reasonable freehand copy of the signature. Microscope, infrared and ESDA examinations are used to reveal evidence of any guidelines, which may have been used to produce a traced copy.

Generally speaking, if two (or more) signatures of reasonable length and complexity exhibit near total coincidence in form, then it can be stated that they are based on a common unknown model or, alternatively, one of the signatures under examination may be the model from which the other signature was traced. It is often the case that the known signatures submitted for comparative examination include the model used as a basis for the tracing.

Photocopy cut-and-paste and other image manipulation techniques are also frequently encountered in questioned signature cases and can similarly be shown to be such once the model signature has been found. Other evidence of document manipulation is often found in such cases in the form of duplicated photocopy trash marks.

### **Disavowed Signatures**

In some cases it is not uncommon to encounter cases where it is possible to state with confidence that, whilst the "signature" in question exhibits gross differences when compared with the known signatures, it was nevertheless written by the writer of the known signatures. This situation may arise where a person genuinely does not recall having signed the document in question; or where the signatory seeks to keep options open by incorporating in an otherwise normally written signature an obviously different feature which could later be used to support denial of the signature.

In both situations, one has to ask the question: what is the likelihood of a forger reproducing all of the subtle and unconscious features which are characteristic of the genuine signatures, whilst at the same time introducing gross differences into the signature? The objective of the forger is to replicate the genuine signature. If the perpetrator has the ability to observe and reproduce the subtleties of the genuine signature, he/she is extremely unlikely to introduce features which will attract attention to the signature and cause it to be questioned.



### **Freehand Production Where No Attempt is Made to Replicate Another Person's Signature**

It sometimes happens that the forger will have no knowledge of the form of the genuine signature of the person whose signature is to be forged. In these circumstances the forger will obviously make no attempt to imitate the signature of the other person but may attempt to introduce some disguise into the signature in order to conceal natural writing characteristics. Nevertheless, the forger frequently provides within the signature the evidence which may lead to determination of the likely writer. Access to a large sample of the forger's normal writing will often provide sufficient material upon which to reach a conclusion.

Fictitious signatures can also be considered under this classification as they are written without any attempt to reproduce a genuine signature of any person. Such signatures usually appear on receipts for the supply of goods. Subsequent comparison of the fictitious signature with the writings and signatures of the suspect may lead to the identification of the writer.

### **Computer Transactions and the Electronic Signature**

Despite the large amount of commerce being accomplished electronically, we are still a long way from the paperless society. A significant proportion of fraudulent transactions depend upon inadvertent acceptance of documents which might appear to be genuine but which are not genuine for one of many possible reasons. The document examiner is still called upon to determine which aspects of conventional documents provide evidence of non-genuineness. Nevertheless, the document examiner nowadays has to be aware of the growing media of electronic commerce and have contacts with experts in the appropriate disciplines for examinations outside the area of traditional document examination. There are many initiatives being made in making electronic transactions more secure (and many are currently not very secure). One of the most interesting is in the field of electronic signature recognition. The potential for this field is great, since it combines the traditional role of the written signature as being the ultimate imprimatur of a person's agreement to the effect of a document or transaction with the means to check the validity of that signature on line and in a far more sophisticated manner and with far greater reliability than the often cursory glance by the bank teller or shop assistant.

Indeed, the stored electronic signature can contain far more quantitative information about a signature and its dynamics than can be gleaned from microscopic examination of the results of signing a piece of paper. The document examiner of the near future may well be called upon to examine such stored parameters in order to determine the genuineness or otherwise of a disputed electronic signature.

### **THE ROLE OF THE LAWYER**

To preserve the evidentiary value of documents, the lawyer undertaking the case should take the following steps:

- contact a document examiner as soon as possible for preliminary advice;
- do not allow the document to be treated for latent fingerprint development prior to submitting it to the document examiner; processing for latent fingerprints may alter valuable evidence and will render the use of ESDA ineffective in detecting latent writing impressions evidence;
- always submit the original document for examination when it is available or obtainable; preserve and protect the questioned and known documents from

- extremes of temperature, humidity and from receiving inadvertent writing impressions pending delivery to the document examiner;
- provide background information on the nature of the case - this will often result in the document examiner requesting and obtaining further relevant documentation.

## WHERE TO GO?

How does one go about engaging a document examiner to assist with a case? While there is no difficulty in finding trained and non-trained people in this field in the Yellow Pages and legal journals, lawyers should thoroughly research the background of any expert they are considering engaging. Be sure that you are engaging a person who has undergone a structured training programme under the guidance of qualified and experienced document examiners in a dedicated and recognised document examination laboratory and that the person has the necessary experience and equipment to undertake the required examination and has a quality assurance procedure.

Unfortunately the courts are sometimes prepared to allow evidence to be given on matters pertaining to document examination and handwriting issues in particular by anyone who can demonstrate that they have what the courts perceive to be a better knowledge of the subject than the lay person. This precedent comes from a time when few people were literate. The sometimes gross incompetence of people who have not received proper training in the field can result in the courts being seriously misled on an issue, and usually adds great amounts of time to the hearing. These experts can also bring the profession of questioned document examination into disrepute as their incompetence is immortalised in cases involving them and later referred to as being indicative of the lack of efficacy of document examination in assisting the courts.

The Australasian Society of Forensic Document Examiners is the professional organisation for Document Examiners, having members drawn from both government and private practice throughout Australia, New Zealand, Papua New Guinea and Hong Kong and can be contacted for information as to which members of the Society are available to undertake consultancy, for general enquiries or in case of difficulties with forensic document examination results.

## COSTS

Costs are usually calculated on an hourly basis and vary from one private expert or document examination company to another. Typical costs for a straightforward questioned signature comparative examination, with suitable specimens and an appropriate report by this firm range from \$800 to \$2500. Costs can be significantly less or more than this range. Usually a more precise estimate of costs can be provided upon receipt of the documents or good copies of them.

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# COPYCAT ARSON: HOW THE FLAMES ARE FANNED.

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*Copycat: noun 1. a child who copies another's work 2. a slavish imitator – adjective 3. similar to or imitative of some other occurrence: copycat murder (Delbridge et al., 2001).*

*Abstract: The idea of copycat arson has been raised by the media whenever a spate of similar fires occurs in an area. But the evidence for this notion is limited. The difficulties associated with researching copycat crime mean not a lot is known about the phenomenon, including whether or not it even exists. Even less is known about copycat arson because arson is not one of the main crime-types that have been investigated by copycat crime researchers to date. Accordingly, the intention here is to extract salient features from what is known about the phenomena of copycat crime and apply them to what is known about arson. On this basis some implications for the future management of media involvement in reporting arson incidents will be considered.*

“Copycat”, “imitation” and “contagion” are terms that have been used interchangeably throughout the literature

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to refer to behaviour that has been inspired by a previously witnessed act. Traditionally research in this area has focused on the effect of suicide stories relayed in visual and print media on subsequent suicide rates. As a result, the impact of media reporting and portrayals of suicide incidents on actual suicide behaviour has been widely recognised (O'Carroll & Potter, 1994; Phillips, Lesyna, & Paight, 1992; Stack, 1987). In fact the issue has become so concerning that recommendations have been made for the responsible reporting of violent incidents of this kind (Gould, Jamieson, & Romer, 2003). While the exact nature of the effect has yet to be clarified<sup>2</sup>, the evidence for a copycat phenomenon for suicide appears to be substantial (Pirkis and Blood, 2001). Less clear is whether this effect can be generalised to crime.

## Copycat Crime

A clear definition of copycat crime is somewhat elusive but probably best explained by Ray Surette, a criminologist who has been exploring this issue since the mid-1980's. He states that for a crime to be considered copycat there must be some element of the original crime incorporated in its undertaking, such as in the choice of victim, motive, or technique (Surette, 1998). Taking this notion beyond mere similarities in *modus operandi* the concept of a copycat crime is that it has been inspired in some way by a crime previously committed by someone else. A recent review of the relevant literature

<sup>2</sup> There is some debate in the suicide literature as to whether publicized stories affect the rate of actual suicidal behaviour or only the method chosen by people who would have suicided anyway (Stack, 2000).

found that the weight of evidence for copycat crime suggests that the phenomenon exists but at an unknown rate, although this is by no means conclusive (Surette, 2002).

Commentators (including the media themselves; see Turnbull, 1997) have highlighted the potential for media to influence criminal proceedings depicting journalists as jostling for position as the incident unfolds, generally getting in the way of the authorities and releasing unauthorised details of the crime that compromise subsequent investigations (Turnbull, 1997). Certainly there are anecdotal reports that in some cases media involvement has hindered the effective handling of an incident, particularly concerning the delicate negotiations in sieges involving hostages (Munday, 1994). Links between media reports of armed robberies or incidents of mass murder and subsequent increases in the rates of these crimes have also been highlighted (Cantor, Sheehan, Alpers, & Mullen, 1999). More generally, research into the effects of violence in the media has established a clear association to subsequent behaviour, particularly in children (Surette, 1998).

But for every account of copycat crime there is another that denies its existence (Clarke & McGrath, 1992; Stack, 1989), a position endorsed by the justice system which has so far refused to hold "the media liable for acts performed by media consumers" (Surette, 1998, p. 138). The contradictory results of research in this area could be attributed in part to certain methodological issues associated with copycat crime studies.

### **Methodological Issues**

One of the main difficulties in exploring this issue is the problematic matter of identifying a pair of crimes that is media-linked. Researchers tend to rely on the ability (and willingness) of offenders to: a) admit their crimes, and; b) acknowledge the source of their "inspiration" as being media-connected. However, self-report data is notoriously unreliable in criminological research generally (Petersilia, 1980) and represents some specific difficulties for copycat researchers (Cantor et al., 1999). Differences across studies in terms of research variables examined may also account for the lack of clarity in the literature. In his recent meta-analysis of 293 published research findings concerning media impacts on suicide Stack (2000) found certain study characteristics were more strongly associated than others with results supportive of a copycat effect. Based on multivariate logistic regression analysis the single strongest predictor of a copycat effect was the presence of a celebrity or well-known person in the original suicide story, while in the main observer characteristics were unrelated to the odds of finding a copycat effect.

### **Theoretical Explanations**

Assuming a copycat phenomenon exists, exactly how the media might influence subsequent viewer behaviour has yet to be established. Several theories have been proposed to explain the association between media coverage of suicide and subsequent suicidal behaviour but methodological and theoretical limitations restrict the extent to which they may be considered useful. Surette(1998) argues for two possible explanations as to how a copycat effect

might influence subsequent criminal behaviour.

On the one hand, the media might trigger individuals to commit certain crimes as well as criminalize those who would otherwise be law-abiding citizens. In this manner media reports of certain criminal actions could influence the *amount* of crime that is committed. Alternatively, media might serve to influence the *way* in which crime is committed. Surette (1998) suggests that by providing extensive and detailed coverage of criminal acts the media enables existing criminals to modify and refine their techniques. In this way people are not necessarily being influenced to carry out new crime types, but to undertake their existing criminal acts in a more educated and potentially sophisticated manner. Thus the media influence is to mould the *quality* of crime without actually increasing the *quantity* of criminal acts in the community.

### **Copycat Arson**

Although claims of copycat arson are relatively common in the popular media an extensive review of the literature has found few empirical studies exploring this issue. One exception is Morgan, Cook, Dorkins, and Doyle's (1995) analysis of several firesetting incidents which they claim represent a series of copycat arsons. Ultimately, however in their analysis and discussion Morgan et al. fail to adequately demonstrate whether and how the fires lit by each of the six individuals studied are linked beyond the fact that all the fires occurred in one Unit (two wards) of the hospital and at a time when at least one of the

previous arson offenders was an inpatient.

A series of eight fires lit by six patients over a 23 day period across two wards of a psychiatric hospital was reviewed (Morgan et al., 1995). Despite the reference to copycat effects the evidence presented for the existence of a copycat phenomenon in this instance was limited at best. The brief statistical analysis reported in the study found the series of fires represented a statistically significant increase in the rate of accidental and malicious fires previously recorded, although it was unclear whether the comparison data related to only the two wards involved in the current series or was included fire reports for the entire institution. Yet this type of statistical pattern, while potentially relevant for hospital administrators, does not in itself suggest a copycat effect.

Further, as well as highlighting the sudden increase in rate of firesetting behaviour in the institution as symptomatic of imitative behaviour Morgan et al. (1995) suggested the frequency of fires indicated an element of contagion in this series. But the singular fact that several fires occurred in relative temporal proximity is not indicative of a copycat phenomenon operating. By definition a copycat arson must demonstrate elements inspired from an earlier observed firesetting act. In Morgan et al.'s study the description of both the initial and subsequent firesetting behaviour is limited and no attempt appears to have been made to establish points of similarity between the characteristics of either the offenders or their firesetting behaviour which might indicate a copycat effect.



Finally, the time span covered in Morgan et al.'s (1995) study is problematic. Some authors have contended a copycat effect can exist for any period between three days up to ten years after the initial report depending on a variety of situational and personal factors and the type of crime involved (Cantor et al., 1999). Accordingly, the time frame of this study appears rather arbitrary and it is not clearly established whether these fires are part of an ongoing series of copycat arsons, whether they represent the start of a series of copycat fires, or even whether there is a copycat element in the series at all.

As a reference for copycat arson obviously Morgan et al.'s (1995) study is problematic because it fails to adequately highlight the link between the fires that demonstrates a contagion effect. While there is the possibility this sequence of fires might represent a series of copycat arsons, it seems equally probable that it may simply be describing a series of sequential but independent firesetting events. An extensive literature search has failed to locate further studies of copycat arson, although several media reports of alleged copycat fires were evident.

### **The "Typical" Arsonist**

Arsonists are obscure characters. Relatively little is known of their habits and behaviours or about how these individuals differ, if at all, from other types of offenders. It is worth mentioning that the term used to describe individuals who set fires varies throughout the literature. Synonyms for non-accidental fire-setters include arsonists, firebugs, vandals and

pyromaniacs. The language used tends to reflect the perspective of the user, with different terminology appearing across medical, legal and popular contexts (Barker, 1994). Ultimately, however, the different terms all refer to the same thing, that is an individual who deliberately lights fires, and all have a pejorative connotation.

Arson is predominantly committed by males, a trend which is consistent with patterns of participation in criminal activity generally (Farrington, 1996). Stewart (1993) quotes a ratio of 6:1 male to female arsonists based on crime and criminal statistics and most studies involving a random sampling of arsonists have found approximately 80% or more are males (Bradford, 1982; Leong, 1992; Puri, Baxter, & Cordess, 1995; Rasanen, Hirvenoja, Hakko, & Vaisanen, 1994; Soothill & Pope, 1973). Although younger (16 to 25 years old) arsonists appear most commonly in the literature, this may be an artefact of a lack of criminal experience and resources, leading to these individuals being over represented in the criminal justice system. In general, arson is committed most often by adolescents, but with a recorded age range of 4 to 73 years (Baker, 1994) it is undoubtedly a crime that is accessible at any age.

The background of most arson offenders is consistently reported as deficient. They often have a dysfunctional family setting with one or both parents being absent. They may have been abused and / or neglected as a child. This is a similar pattern to offenders generally and, like most offenders, arsonists are also reported as typically being socially and educationally disadvantaged (Koson & Dvoskin, 1982; O'Sullivan &

Kelleher, 1987), socially maladjusted (Geller, 1987; Inciardi, 1970; Rice & Harris, 1991), and substance abusers (Inciardi, 1970). Many arson samples are described as mentally deficient (Levin, 1976; Rasanen et al., 1994; Stewart, 1993; Vreeland & Levin, 1980) although in her review of the literature Barker (1994) found that "arsonists on the whole are not mentally ill" (p. 49). Where mental illness is evident the most common diagnoses are schizophrenia, mental retardation, and personality disorder.

In terms of their criminality most arson research has considered the offending histories of arsonists only to the extent that it provides background information to the study population. One notable exception is the comprehensive study conducted by Soothill and Pope (1973), the value of which lies in the exceptionally long follow-up period (20 years). Many arsonists have prior criminal convictions (Barnett, Richter, & Renneberg, 1999; Repo, 1998; Sapsford, Banks, & Smith, 1978). In fact, while some authors have concluded that arsonists tend to have unintensive criminal careers (Foust, 1979), others have supported a pattern of a low rate of arson recidivism but a higher rate of reoffending in other crime types, particularly property-based crime (Barnett & Spitzer, 1994; Hill et al., 1982; Hurley & Monahan, 1969; Soothill & Pope, 1973).

### **The "At-Risk" Arsonist**

Overall, the general picture of the arsonist is one of an individual with significant mal-adaptive behavioural patterns, of which firesetting is but one. Extrapolating from the relevant, albeit

limited, research into variables associated with copycat crime it may be suggested that individuals with a prior criminal history (particularly for property crime), low academic achievement, and high rates of media consumption might be particularly vulnerable to a contagion effect. More recently, the individual's attitude toward the media and peers has been postulated as one of the more significant influences in copycat behaviour (Surette, 2002) although this dimension has yet to be explored in relation to arsonists. Reaching further into related but noncopycat literature, links have been established between media and aggression particularly for individuals from low socio-economic backgrounds, who are young, angry, and have a poor academic record (Surette, 2002). Many of these characteristics are relevant in a discussion of arsonists. While a picture of the "typical" arsonist is difficult to obtain (primarily because of issues relating to sample bias; see (Doley, in press) the presence of one or more of these copycat correlates in the arsonist profile is suggestive of the possibility that at the least a sub-group of firesetters might exist who demonstrate a heightened susceptibility to a copycat effect.

### **Recommendations**

Arising mainly from the suicide contagion research a series of guidelines for journalists and editors reporting suicide stories have been developed (Gould, Wallenstein, & Davidson, 1989). Recommendations for the reporting of some crime types, such as terrorism, have also been proposed, although in a less comprehensive and more informal manner (e.g., Munday,

1994). Should a copycat effect be found for arson it is not unreasonable to suggest that guidelines for the reporting of fire incidents also need to be established. But herein lies a contentious issue. Efforts to minimise a contagion effect may easily be misunderstood. Advocating media guidelines for reporting opens a Pandora's box of media ethical issues and censorship allegations (Hurst & White, 1994). Hassan (1995) acknowledges the delicacy of such negotiations in connection to the reporting of suicide when he writes In a pluralistic democratic society, the media must report public interest stories and should not be subject to censorship; however, bearing in mind the possible impact of media reports on vulnerable people, a more careful and sensitive approach to reporting suicide may reduce this impact (p. 483).

Undeniably, it is important that before calls for changes to media reporting of fires, for example, carefully established scientific evidence is collected to support the notion of an arson copycat effect. Clearly, however, at this time there is simply insufficient evidence to determine with any degree of confidence whether or not a contagion effect operates for firesetting behaviour.

### Conclusion

Anecdotally, at least according to the media, there is a copycat effect operating for arson. Difficulties in accessing suitable arson samples and in constructing appropriate and effective copycat research methodologies should not dissuade investigators from taking a

closer look at the issue of copycat arson. An advantage copycat arson researchers will have over suicide contagion studies is that the offenders should be available to answer questions about the impact of their media consumption on their firesetting behaviour, which hopefully will result in a more comprehensive account of the issue than might otherwise be possible. Copycat research finds there are a range of strategies designed to prevent contagion which do not necessarily involve the exclusion of all news coverage, but rather concentrate on modifying specific aspects of media reporting that influence the imitation effect. Should a copycat effect be found for firesetting behaviour there appears to be some hope, therefore, that measured and well-considered steps could be taken to reduce the potential risk of copycat arsons.

*(Rebekah Doley is a criminal behaviour analyst and consulting psychologist specialising in the analysis of arson. She completed a major research project focusing on the criminal behaviour analysis of arson in the United Kingdom while completing her Master of Science (Investigative Psychology). She is completing PhD studies in the issue of deliberate firesetting in Australia with a view to identifying alternative strategies for better managing this crime).*

*Copies of the references used in this paper may be obtained by sending an email request either to the author (rebekahdoley@bigpond.com) or to the Editor (Walsternemail@aol.com)*