

THE PROBLEMS ASSOCIATED WITH FINDINGS FIBRES IN TERRORIST CASES

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ABSTRACT: There are a number of factors affecting the possibility of recovering fibres and other trace evidence in terrorist incidences. These include the types of garments generally worn by the suspects, e.g. the garments neither shed nor retain fibres, and also the destruction of the items and clothing that have been used in the incident. Despite this the fibre evidence has in many cases connected the suspects to the incidents and has been the pivotal evidence in court.

KEY WORDS: Fibres; Fibre recovery; Terrorist incidences.

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INTRODUCTION

This talk illustrates the problems we all encounter in fibres casework. These are however more prevalent in terrorist related incidents.

After almost 30 years of the “troubles” in Northern Ireland the terrorists have become very experienced in forensic science. They have become experts by using the knowledge they have gained from the reports of Independent Witnesses and from the questions asked of the Fibre Examiner in court, at their own or their colleagues’ Trials. Using this information they have adapted their methods so that they minimise or prevent both the transfer and the recovery of fibres and of other trace evidence.

In many cases this is achieved by wearing clothing which will neither shed nor retain fibres e.g. latex gloves. Also the time delay between the incident and a person’s arrest means that they have time to change or wash their clothing and to hide or destroy any items that have been used in the incident.

The challenge then for the fibre examiner in a case is to quickly find a useful fibre source and determine in which direction to start the search. This source can be from the suspects clothing or from the items at the scene, vehicle or escape route. The tape searching is then organised to connect this source to as many of the suspects and items as possible.

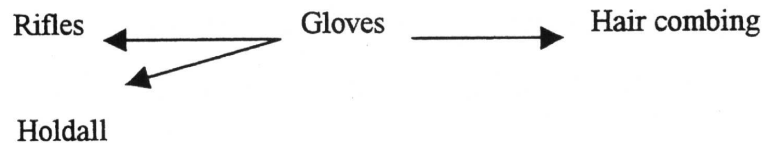
FACTORS AFFECTING THE RETRIEVAL OF FIBRE EVIDENCE

Clothing

The nature of the clothing worn in the incident means that there are often no fibre sources available from either the suspect, the scene, or the items retrieved. The clothing is generally non-retentive and non-shedding e.g. old, dirty and threadbare clothes, boilersuits (disposable or polyester/cotton), nylon/waterproof jackets, denims, white cotton or surgical gloves.

In many of the incidents the suspects have worn knitted masks and/or gloves, frequently composed of wool, acrylic, angora or polypropylene fibres. Because of this the head hair combings should be taken from all prisoners after arrest, i.e. when processing the prisoner and removing their clothing. These combings can be examined quickly in the laboratory for fibres from the masks and gloves while the other garments are being processed.

Case example 1: Items from the escape route were connected to the hair combings and to the rifles used in the incident.



It is not unusual to find all the suspects wearing identical balaclavas or gloves. If no batch differences can be found then other contacts must be examined to connect them to a particular mask.

Case example 2: In this incident 4 black acrylic masks were recovered which were indistinguishable. The suspects were connected to specific masks by contact with other items of their clothing e.g.:

Disturbance

It is known that fibres fall off the garments with normal activity. In many incidents there may be a chase across fields, the suspects may have swum across a stream, or there has been a struggle during the arrest. The loss of fibres is accelerated by this activity. Therefore the fibres on the surface of garments have probably been lost before the clothing is seized.

Fibres are lost in the transport of the suspect to the police station even with the use of protective capes. Also there may be 5 hours or more delay between the arrest and the processing of the prisoner in the custody suite (to remove clothes etc.). Fibres will also be lost in the removal and packaging of clothing/items.

However, at some time the gloves and masks will have come in contact with the pockets of the trousers and jacket, either by carrying the items in the pockets or by putting the hands in the pockets. These gloves and masks can be connected to the pockets.

Case example 3: A woman drove a car into a garage owned by a part time soldier in the Ulster Defence Regiment, UDR. She asked him to fix the exhaust pipe. He immediately got into the car and started it. She ran off as the bomb exploded under the car. Witnesses saw a woman running away from the scene. She was described as a small blonde woman, wearing black clothing and carrying an umbrella. The woman was taken from the scene in a car and escaped. A week later she was arrested but had burnt her clothing. Another person arrested was the driver of the getaway car. He admitted being the driver and took the police to the escape route where the woman had allegedly thrown out of the car a pair of gloves and an umbrella. These were recovered from the hedges and ditches at the side of the road. Laboratory examination connected the gloves to: a) – the umbrella and b) – the pockets of the jacket.

Disposal of evidence

The clothes may be abandoned e.g. at the scene, on the escape route, in the vehicle or placed in a bin. These items then have to be connected to both the suspects and the items associated with the incident.

Case example 4: A motorcyclist drove into a car park and pulled up beside the security guard. He fired two shots into the face of the guard. The guard knocked the gunman off the motorcycle and there was a struggle. The gunman made his escape. Later various items were recovered in a search of a house and from the escape route. Fibres were found which connected various aspects of the incident.

After an incident the suspects go to a safe house, or get picked up by their accomplices and are given a change of clothes. The accomplices then take the clothes and weapons, used in the incident, to a hide or safe house. These items may never be recovered.

Destruction of evidence

The time delay between the incident and a person's arrest means that they have time to change, wash their clothing, and to hide or destroy any items that have been used in the incident.

Washing: Often when the suspect is arrested the clothing is recovered from the washing machine and this is brought to the laboratory complete with water and contents. However in many of the washing machines the door is locked and cannot be opened without electricity. The quantity of water in the garments also hinders the examination. Even after washing it has been found that fibres remain in the pockets and useful connections can be made. This is shown in the following examples:

Case example 5:

- a) Clothes recovered from the washing machine included a green combat jacket. This had a pair of black knitted gloves in the left pocket. Fragments of threads and blue green fibres were recovered from the surface of the gloves. These matched the fibres from the victim's sweater.
- b) Two sets of clothing were removed from the washing machine at the home of a suspect. Fibres were recovered from the pockets of the jeans and jacket that matched the mask found at the scene.
- c) After a mortar attack on a police landrover the suspects escaped on foot through the streets. In a follow up search 2 men were arrested in a house. They gave as their reason for being there the fact that they were working as decorators, painting the hallway. Clothing was found in the washing machine (jackets, trousers etc.). In the pocket of one of the jackets was a pair of gloves. Fibres matching the gloves were found in the head hair combing of one suspect and were later connected to the escape route and firing point.

The suspect may also have showered to remove any trace evidence. Fibres, matching any available sources, may be recovered from the towels and facecloth they have used. These fibres are due to secondary transfer, e.g. from the suspects' hair. Also if there are any fibre sources available e.g. gloves or mask, these can be connected to the suspects head hair combing, even if a person has changed their clothes or showered.

Vehicle destroyed: The vehicle used in the incident may be partially or completely burnt. Also the clothing may have been left in the vehicle and will also be burnt. Hence usually there are no fibre sources available.

Sometimes a bomb is present in the car and explodes destroying everything inside. Normally the vehicles and weapons are "cleared" by the Army Technical Officers (ATO) as these have to be examined for booby traps before the Scenes of Crime Officers (SOCO) can do a search and remove the items and package them. Blowing out the locks of the vehicle to allow access and then disrupting any devices found "clears" the vehicle. Sometimes the ATO misjudges the charge required e.g.:

Case example 6: In a murder case the getaway car was parked in a narrow alleyway. In the controlled explosion the energy bounced back off the walls onto the car and caused the car to implode. I was requested to tape the

seats for fibre transfer evidence! However, the seats had turned inside out and everywhere was covered in particles of foam. Car seat fibres were found, a month later, on the clothing of a suspect recovered from a holdall in which were also found his dole/welfare card. Only two car seat fibres were found. When told this at interview the suspect then admitted his involvement as the driver of the vehicle.

How successful is fibre examination

“The impossible we can do at once, miracles take a little longer”

A typical terrorist case would have many different aspects to it. The scenario outlined below illustrates this:

A house take-over was carried out by a number of persons and the family was held hostage overnight in the house. Some of the gang remained with the family while the others took the family’s car and used it in the incident (armed robbery, murder etc.). Afterwards the car was abandoned and the gang members were picked up in another vehicle. Clothing and weapons were removed to a safe house or hide. 5 or more suspects were later arrested and their houses searched. The house, car, suspects and their houses, and getaway cars all have to be examined.

Retrieval of fibres

If there is a good fibre source then it is relatively easy to find fibres and show the areas of contact e.g. case example 7:

The small number of fibres shown in this case is typical of the contacts found in terrorist cases.

Many of the garments are a poor source of fibres. However these garments may be the only source available. In some jackets (e.g. nylon, bomber style jackets) there is a knitted, stretch waistband, cuff and collar that is the only area of the jacket that sheds fibres. Fibres from this stretch fabric can be connected to e.g. car seats where the fibres are usually found on the lower part of the seat back and on the adjoining part of the squab. The cuffs can also be connected to weapons or gloves, and the collar to the masks.

Head hair combings and also the pockets of garments are routinely examined if there are gloves or masks associated with the incident. The head hair combings have been a very lucrative area for fibre connections between the

suspect and the incident. These will be the first, sometimes the only, fibre examination to be carried out in a particular case at the laboratory.

In many cases indirect links have to be made because of the various factors discussed above. These indirect links can be e.g. the masks and gloves are often transported to or from the scene in the same bag as the weapons. If these garments are not recovered then fibre populations removed from the weapons or bag may be from e.g. the gloves and can be used to connect the various aspects of the incident. These fibre populations, “unknown sources”, may provide the only connections in a case.

Case example 8: Approximately seventeen armed men took over the Post Office Sorting Office. The staff was held at gunpoint in the office while the postmaster and his assistant were taken to the strongroom. The postmaster struggled with one of the gunmen and was killed. The gang made their escape in various vehicles with the moneybags. In the scene examination a sledgehammer was recovered from the strongroom floor. Fibres were visible on the wooden shaft of the sledgehammer and these fibres were used as a source. Two suspects were arrested in a car a number of miles away from the scene. A third person escaped. Fibres recovered from the tapelifts of the car seats and door panels, and on the Post Office uniform in the rear of the vehicle matched the fibres on the sledgehammer.

Other useful connections can be made using the fibre populations, the “unknown sources”, found on items known to be involved in the incident e.g. left at the scene. These indirect links and unknown sources can strengthen the evidential findings in the case.

Case example 9:

Many times, for various reasons, it is not possible to connect the suspect directly to the incident by fibres.

Case example 10: Gunmen walked up behind 2 RUC officers and shot them in the back of the head. The gunmen ran to a waiting car and drove away. It was later recovered, however it was burnt out. There was no contact between the suspects and the victims and it was not possible to make any direct fibre links in this case. Also as in other incidents the car had been purchased a week before from a newspaper advert.

Other factors

- a) The holding time of the person in custody is initially 24 hours. This can be extended to 48 hours and then, under terrorist legislation, to 5 or 7 days as further evidence becomes available. There can be delays of > 5 hours before the items can be delivered to the laboratory and book them in, e.g. approximately 5 to 26 hours before the suspects' clothing was removed, as shown in the table.

TABLE I. TIME DELAY OF CLOTHING DELIVERY TO LABORATORY

Date and time of arrest	Removal of clothing	Time delay
1/1/00; 5.45 am	16.34	Approximately 11 hours
1/1/00; 7.03 am	11.50	Approximately 5 hours
1/1/00; 7.11 am	13.34	Approximately 6.5 hours
1/1/00; 18.08 pm	20.45 on 2/1/00	Approximately 26 hours

With the number of suspects in a case, 3–8 typical, there is a limit to the work that can be done in the holding time. Therefore the main approach is to prioritise the laboratory examination so that any meaningful connections can be found within the limited timescale available i.e. the holding time.

- b) Other evidence types may be affected by the fibres examination and *vice versa*. In many cases, because of the many items to be examined, agreements are made with the police and the other sections of the laboratory i.e. that some items are only examined for 1 evidence type, e.g. fingerprints or residues, while others are examined for all evidence types. This is determined by the fibres sources available and the most important connections to be made.
- c) Over the past couple of years the terrorists have been cleaning up after themselves.

Case example 11: A house take-over in which the family was held hostage overnight. In the morning one member of the family was taken to rob the business premises. The rest of the gang tidied the house i.e. they cleaned the kitchen floor (to remove footmarks), rubbed the surfaces they might have touched (to remove fingerprints) and taped the seats and beds they had been in contact with (to remove fibres). The SOCO taped the seats and beds in the house as normal. The beds were taped because the gang took turns to watch the family while the others slept on the beds. Some members of the gang were arrested in possession of a bag containing masks and gloves. Fibres were found on seats and on three of the beds (pillows and sheets) which matched these masks and gloves.

- d) Another problem with the terrorist cases is that a conviction cannot be obtained. A notable example is:

Case example 12: A gang went to the house of the manager of a Cash and Carry. While 2 members of the gang took him away to open the premises his wife and children were removed to another house and held hostage. The rest of the gang arrived at the premises in the lorries and rounded up the workers. A gunman kept them together in a room. While the lorries were being loaded the police arrived at the scene. The gang dropped their weapons, masks etc. and ran. Seven gang members were caught, on or near the premises. Subsequently there were approximately 5 trials in this case. In at least 3 of these the jury was threatened and the trial was restarted. In another attempt a jury member became ill. In the final trial the jury could not decide (even though the gang apparently were caught in the act!). Finally the Director of Public Prosecutions decided that there would not be another attempt to try them and they were acquitted.

CONCLUSIONS

Despite all the efforts made in terrorist related cases to prevent the transfer and recovery of fibres we have been successful in recovering fibres matching the sources available. Often, as seen in the examples I have given, the contact was with a mask or gloves. Hence in many cases head hair combings and pockets have been the main areas of contact found.

Even with the advances in DNA fibres are still a primary evidence type at FSNI. In many cases DNA can connect one suspect to the incident while only fibres can connect the others. In many cases fibres have been the only evidence available to show a direct link with the suspects or to tie all the circumstantial evidence together. Therefore a primary trace evidence in terrorist and other incidents has been, and still is, fibres.