



The National Policing Homicide Working Group

JOURNAL OF HOMICIDE AND MAJOR INCIDENT INVESTIGATION

Volume 10 Issue 2, November 2015

Contents

About the Journal

About the Homicide Working Group

Contact Details

About the Journal

The Journal of Homicide and Major Incident Investigation encourages practitioners and policy makers to share their professional knowledge and practice. The journal is published twice a year on behalf of the National Policing Homicide Working Group (HWG).

It contains papers on professional practice, procedure, legislation and developments which are relevant to those investigating homicide and major incidents.

All contributions have been approved by the Editorial Board of the HWG. Articles are based on the authors' operational experience or research. The views expressed are those of the authors and do not represent those of NPCC. Unless otherwise indicated they do not represent national policy. Readers should refer to relevant policies and practice advice before implementing any advice contained in this journal.

The Journal is edited by Peter Stelfox on behalf of the National Policing Homicide Working Group.

[Back to Cover](#)

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[Back to Cover](#)

About the National Policing Homicide Working Group

The National Policing Homicide Working Group (HWG) is part of the Violence Portfolio within National Policing Crime Business Area. It develops national policy and practice for the investigation of homicide, major incidents and other serious crimes.

The HWG also supports and promotes the training and professional development of practitioners and provides oversight of levels three and four of PIP. It encourages research into homicide and major incident investigation and fosters good working relations between practitioners, policy makers and academics in this field. Membership of the HWG is drawn widely from the Police Service and partner agencies. It comprises the following:

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Contents

Organised Immigration Crime, Human Trafficking and Exploitation: Operation Attwood	5
Paul Callum	
T.I.E Practice: Terminology, Tactics and Training	21
Michelle Wright, Tony Cook, David Pinder, Adam Gregory, Gary Shaw	
Analysis of Photo Response Non-uniformity (PRNU)	45
Anna Bartle, Andy Langley	
The David Guilfoyle Murder Investigation	58
Paul Withers, Andy Hulme	
Homicide Research Group Update	70
Michelle Wright, Ian Waterfield	
Operation Sanderling	77
Harry Harrison, Mike Ross, Simon Lees	
The Evolution of Homicide Investigation in the UK	92
Peter Stelfox	
Index of the Journal of Homicide and Major Incident Investigation	108

Organised Immigration Crime, Human Trafficking and Exploitation: Operation Attwood

Superintendent Paul Callum, Derbyshire Constabulary

Abstract

Human trafficking and exploitation by organised crime groups has received extensive media attention in recent years and is high on the political and policing agenda. Despite this, many SIOs have little or no experience of the complexities of this type of investigation, and until Operation Attwood, that included me.

Operation Attwood was an in depth criminal investigation into a Derby based Eastern European OCG which involved the trafficking and exploitation of migrant workers and large scale benefit fraud. The group targeted and recruited vulnerable male adults from Slovakia and the Czech Republic for the purpose of financial exploitation.

Managing that operation was a steep learning curve and this paper seeks to share that learning with others to improve our effectiveness in addressing this type of crime.

Contents

1. Introduction
2. Instigation
3. Developing the Investigation
4. A Change of Direction
5. Strike Day
6. The Charges
7. Key Issues and Lessons Learned
8. Conclusions

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1. Introduction

In August 1967 Martin Luther King made a speech in which he said:

"As long as the mind is enslaved, the body can never be free. Psychological freedom, and a firm sense of self-esteem, are the most powerful weapons against the long night of physical slavery"

When I joined the police force 29 years ago the thought that I would be dealing with offences such as slavery, trafficking and exploitation in 2014 seemed absurd. These were offences, so I thought, that had been consigned to an era long since gone.

But, slavery is still present today. It is seen in forced child marriages, child soldiers, work slaves, sex slaves and many other forms. The *Global Slavery Index* estimated that in 2014, more than 35 million people were in slavery in the world. (Global Slavery Index 2014, www.globalslaveryindex.org)

This is not just a problem in other parts of the world. Perhaps I was naïve, but I was shocked by what Operation Attwood found going on under our noses. I had hoped that during my career we had evolved as a society but the sceptic in me feels we have somehow regressed.

Operation Attwood was an in depth criminal investigation into a Derby based Eastern European OCG which involved the trafficking and exploitation of migrant workers and large scale benefit fraud. The group targeted and recruited vulnerable male adults from Slovakia and the Czech Republic for the purpose of financial exploitation.

The core members of the group were three brothers and their respective wives, most of whom already had lengthy intelligence histories of fraud and trafficking. One of their daughters is in a relationship with a member of another OCG family and this provided a link between the two families and their offending behaviour.

The victims were trafficked into the UK by the male members of this group who were the recruiters and facilitators, whilst the females were responsible for the money.

Enquiries suggest that other people within Slovakia and the Czech Republic identified victims and commenced the recruiting process before introducing them to the offenders. Two or three victims were targeted in one go and were brought to the UK, often by car. Once here, they were housed in very cramped conditions. They were quickly taken to obtain a national insurance number and then to open at least one bank account. They did not generally speak English and as a result were not aware of the process they are going through. Once the victims had the necessary documentation they were either put to work through a recruitment agency for cash in hand or returned to Slovakia. In either case, their details were used to obtain state benefits through the DWP. These were paid into their respective bank accounts which were under the control of the offenders.

2. Instigation

On 10th April 2013 a man called Miroslav Farkas went to a police station in Derby and claimed that he had been brought into the country a year ago by a man called Igor Marcin. Marcin had made him sign a lot of paperwork and his documents and money had been kept from him.

He had managed to escape and return to Slovakia but was informed when he got there that he could not claim any benefit as he was already claiming in the UK. He had to return to try and sort this out.

He first went to the Salvation Army and they referred him to the police. The fact that he had been referred via the Salvation Army gave him some credibility but there were a lot of flaws in his story and it is to the credit to the officers who first dealt with him that he was taken seriously.

He didn't seem to have been that badly treated and we later learned that he was actually an "alpha" in the organisation. That is, someone who starts at the

bottom but rises to a supervisory status by carrying out demands at the behest of the offenders. Alphas will be paid slightly more and treated slightly better than the others. These "Alphas" are still victims, even though they are used to keep the rest of the victims in check. They issue instructions on behalf of the offenders and enforce these with physical violence if necessary. It may be done for only £5 per day instead of £2.50 per day, but they are desperate not to lose that status and will do whatever they are told.

The case was brought to the attention of a DS, and was then escalated to me, the Divisional DCI. I reviewed the case and asked for enquiries to be made with the DWP, HMRC and local authority housing to see who else lived at the addresses given and for intelligence checks on the offender, his family and associates. I am not sure what I was expecting but I hoped the information would assist in guiding what to do next.

The DWP showed that there had been in excess of 100 claims over the last four years at the address and the local authority housing showed that the Marcin family had lived at a number of addresses. Our own intelligence showed that Igor Marcin's car had been through Dover on a several occasions every couple of months. Taken together with the original allegation, this suggested to me that we were on to something and there was a basis for further investigation.

3. Developing the Investigation

Even though there seemed to be good grounds for an investigation, as divisional DCI I had to balance a whole range of offences against resources and, as is always the case, we did not have enough staff to do everything. When we had had the complaint for two months I wanted to get it resolved and so decided that the best course of action was to "put the door in, shake a few trees and see what drops out". As a consequence, a strike was planned for the 24th June 2013 with the basic intention of arresting Igor Marcin for interview and seeing what material we could find at his address.

4. A change of direction

Four days before the planned strike another man came into a city centre police station in Derby and made an allegation about the same group of offenders. This led us to delay the operation, which was very lucky, because in hindsight we would not have got as far as we did if we had carried out the original plan.

This complainant was a very different victim from Miroslav Farkas. He was clearly vulnerable and had alcohol dependency. He provided a statement claiming that he had been taken from The Hope Centre for alcohol dependency in a town in Slovakia and driven to Derby. He claimed that a "fat Roma Gypsy" who lived in Derby had been involved. He was promised work, food and a better life.

Once in Derby he was made to work at car washes and was paid £10 a week. He described a culture of fear and intimidation and a feeling that he didn't have any alternative but to carry on working for the family. He had been persuaded that the police would not look after him and that it would not be safe to approach them. He came forward because he had run away from the family, had no food, no documents and nowhere to stay. He felt that he had nothing left to lose. Even then he did not initially report what had happened; only that he had lost his documentation.

We had clearly now got a) corroboration of the original allegation and b) concern that there were more victims in the Derby area. It was at this stage that help was sought from the UK Human Trafficking Centre at the NCA (SOCA as it was then) and I was introduced to DS Steffan Williams. This was the best decision I made during Operation Attwood, I cannot reiterate that enough! If you ever need advice on how to deal with a human trafficking case, Steffan is your man. He is a National Tactical Advisor and he was invaluable.

He told us that pretty much everything we had planned to do was wrong and as a result we postponed the planned operation whilst we took stock and drew on Steffan's knowledge. This led to a multi-agency planning meeting which was the

turning point in the investigation and undoubtedly the key to its eventual success.

Present at the meeting were;

- Derbyshire Constabulary lead Investigators, financial investigators, media and Safer Neighbourhoods Team,
- Salvation Army,
- United Kingdom Human Trafficking Centre (UKHTC),
- National Crime Agency (NCA),
- United Kingdom Border Agency (UKBA),
- Derbyshire County Council,
- British Red Cross,
- Department of Work and Pensions (DWP),
- Gangmasters Licencing Authority (GLA).

A number of other agencies such as the HMRC were invited but were unable to attend.

Steffan advised that a unanimous “buy in” from all agencies was essential and I decided that the best way to do this was to set a strategy that ensured all agencies had a vested interest in this case. Some had statutory obligations in relation to these issues but I never had to remind them of that and each agreed a number of actions that they would carry out. These were all specific and achievable within a very short space of time.

We also adopted a “Strap Line”, which was simple but very effective in getting others to buy in to the operation, it was: *“The City of Derby will not tolerate Human Trafficking”*

I set the overarching objectives as;

1. Identify victims of human trafficking, to ensure their continuing safety and to provide for their ongoing welfare.
2. Identify, locate and arrest any offenders; secure and preserve evidence.

3. To provide a collaborative approach, working with all of our partners locally and nationally.
4. To identify all opportunities to understand this offence and the methods used and in doing so identify best practice and opportunities for improvement.

I made sure that each member of the group went away having made a clear commitment to the operation together with a task and a target date for achieving it. For example:

- the local authority emergency planning department were given the task to identify premises in the city that could be used as a Reception Centre for the victims;
- Derbyshire Constabulary Media Department were tasked to reassure the public around that centre as previous experience from the HTC showed that if local residents are given brief details and informed of what was happening, this had appeased their curiosity;
- the Red Cross and Salvation Army would provide staff to deal with victims at the reception centre;
- the Gangmaster Licensing Authority, confirmed that they would have staff available to attend recruitment agencies involved and attend the target addresses. These staff will also be available the following day too.

The meeting went far better than I could have imagined and there was a real buzz of enthusiasm. Derby had not dealt with a case like this before and there was a determination to get it right.

I was impressed with how keen everyone was to ensure we got a result. Some of the agencies involved have previously had bad press for not dealing with this type of offence, but I found that they were all outstanding and had a real buy in to the operation. I can't emphasise enough how important it is to identify, nurture and maintain good local relationships.

We conducted some surveillance at the known addresses and established that there were at least 10 people, other than the suspects living at them. This was a vital investigative tool and in hindsight I would have widened it to prove the

involvement of the females of the house, an issue which became relevant later in the investigation.

We planned for a new strike day, in what was now a far more complex operation than the one we had originally envisaged, and included:

- arrest teams,
- search teams,
- scientific support and scenes of crime officers to examine the houses,
- custody suites,
- staff to transport victims to the reception centre,
- staff to deal with the victims at the reception centre and interview them,
- doctors to examine them and ensure they were physically and mentally well enough to be dealt with,
- interpreters, we had 15 and that was still not enough,
- media teams to coordinate the response to make sure that we had good coverage across all the agencies involved,
- staff from the local authority emergency planning department, who coordinated the reception centre.

The NCA provided investigators and these detectives really boosted our numbers. We also had staff from all Divisions across the force and the assistance of Nottinghamshire Police to share the custody facilities so that the burden was not too much for our force.

5. Strike Day

The day of the operation was set for 15th July 2014 and to ensure that the message regarding how to deal with victims was maximised we utilised the media and used a pop-up on the screen of the force computer system, with an aide memoir that reminded officers of the correct response.

So, after months of precise planning, with loads of staff on duty and getting the national and regional press involved, we got to our target address and Igor had

moved! However, victims had been left at this address together with other members of the suspect's family and so all was not lost.

It turned out that he had only just moved that weekend and we quickly found his new address because many of the victims had gone there with banking and identity documents. This showed the level of control the offender had over them but also showed that the victims were telling the truth and did not have access to their own documents.

Victims were taken away to the reception centre which was in a former children's home. This was in a beautiful village called Repton and was an ideal location to make sure that they felt safe. The scene there was amazing. It reminded me of a liberation during a war. There were Red Cross volunteers making sandwiches, doctors examining men with head lice, Salvation Army providing basic essentials such as clean clothing and toothpaste. The reception centre was coordinated by DI Tony Britton who being ex-army, ran the unit with precision. Key to the success was an informal briefing that he gave to all of the victims, this informed them as to what to expect and what was going to happen and hopefully put them at ease.

At first the victims were very suspicious of everything that was happening but over the two days they were at the centre it became obvious that they had begun to trust us and the lengthy process of obtaining witness statements began.

A big lesson learned was that the victims who made statements on the second and third days provided better evidence than those who did so on the first. Clearly, trust and reassurance were big issues. That said, with seven in custody we were under custody time limits and needed to crack on with interviews, so getting evidence was carefully balanced against the timing of taking these statements.

The three days following the strike were pain personified. There were not enough interpreters to deal with all the requests, the days were extremely long

and warrants of extended detention were applied for to ensure that we had the best chance of putting all the evidence to the suspects.

Several thousand banking and identity documents had been seized along with a number of luxury cars. A huge amount of phones and computers were also taken.

6. The Charges

CPS had been involved early in the investigation and as a result were on hand during the custody period to provide advice. As a consequence we were quickly able to charge and remand all of the principal offenders with the following;

1. Conspiracy to exploit by arranging arrival into the United Kingdom, contrary to section 4(1) of the Asylum and Immigration (Treatment of Claimants etc) Act 2004 and section 1(1) of the Criminal Law Act 1977, and
2. Conspiracy to exploit by arranging travel within the United Kingdom, contrary to section 4(2) of the Asylum and Immigration (Treatment of Claimants etc) Act 2004 and section 1(1) of the Criminal Law Act 1977.

We breathed a sigh of relief for a very short period of time, basically until we reviewed everything that we had done to date and set out our long term investigative strategy. It was clear that this investigation would be complex.

As always, staff was an issue. The summer holidays were upon us and there was high demand for staff to work on other Divisional priorities. I don't mind admitting, I had to fight for staff at the Gold group and in reality it was not until September that I felt I had a settled team. Once again, the NCA proved really helpful and continued to support us with investigators for several weeks after the initial operation.

We used HOLMES to manage the large volume of material that had been seized and the large number of witnesses who were interviewed, which exceed 200. Some idea of the scale of the work involved is provided by the fact that we

developed over a 1000 fingerprints from documents. Translation also proved a major task because many of the documents that had to be examined were in Slovakian. We found that using Google translate enabled us to carry out an assessment of many of them prior to employing interpreters.

Tracing assets was another major line of enquiry both in the UK and abroad. Intelligence suggested that the offenders had property in Slovakia and that businesses were owned all over Europe in the names of victims. A money trail of over two million pounds was identified but other assets remain untraced.

On 13th January 2014 Igor MARCIN and Marek MARCIN pleaded guilty to two counts of Human Trafficking (into the UK and within the UK), contrary to the Asylum and Immigration (Treatment of Claimants, etc) Act 2004. Their wives, Dagmar MARCINOVA and Gabriela MARCINOVA, pleaded guilty to theft and fraud offences. Igor received 52 months, Marek 40 months and the women 12 months and 10 months for fraud.

A Proceeds of Crime Act investigation is ongoing, in order to maximise any opportunities to confiscate assets and recover lost monies and at the date of writing this has resulted in £10k being recovered.

7. Key Issues and Lessons Learned

Operation Attwood had been a resounding success. Twelve victims were freed from the oppressive situations they found themselves in and four offenders were brought to justice. Significantly, the convictions were secured as the result of guilty pleas rather than a trial, which is testament to the quality and depth of the investigation.

As a result of the investigation we identified some key issues about victim and offender behaviour in this case, these are:

- Victims were often recruited at centres for vulnerable adults.
- Victims were taken from bank to bank to open accounts with offenders being present as interpreters.

- Victims worked both illegally and legally at a range of premises across the City
- Victims working at these established companies had often presented with illness, malnourishment and were sometimes unhygienic.
- Victims worked extended daily hours, over six or seven days a week in unsanitary and unsafe conditions.
- Victims had been working with illness and injury, mostly untreated and several reported acid burns from chemicals at car wash premises.
- Victims had made a number of complaints at police stations and other government agencies and their complaints had been dealt with as "civil disputes" rather than alerting the agencies to offences of trafficking and exploitation.
- The offenders were able to use their vehicles on Slovakian number plates for many years and regularly used the same airports and ferry ports for their trafficking.
- Offenders were able to sign multiple forms at agencies such as the DWP, HMRC in the capacity of either next of kin or interpreter.
- Offenders are suspected of sending large amounts of cash through money brokers in the Derby area.
- The family are Roma gypsies and have clear links to criminal gangs in both the UK and overseas.
- The offender's children have poor education attendance and may have been living in unsuitable conditions with many victims at addresses.

The lessons learned from the investigation are:

- **Witness care.** It was extremely useful to have a single officer dedicated to victim care. It meant that there was a real opportunity for a rapport to be built with the victims. I am sure that this was vital in keeping the victims feeling positive towards the investigation and the court process. It was essential to keep a comprehensive log of all contact with victims. This should include all attempted contact. This would have greatly assisted any hearsay application if the victim cannot be found for the trial.

- **Other Agencies.** MOU – lot of agencies wanted a memorandum of understanding. This was done, but in hindsight we agreed that in fact the data protection act did allow for sharing information and what was really needed was for officers to be specific when making requests. Again this got better as relationships and trust developed.

SPOC – never quite achieved at HMRC but very valuable when we did get one at DWP. I would encourage one at all times. This would mean that contact could be made at any point within the organisation and a simple search would lead straight to the person best placed to assist (or signpost to the right department).

- **Legislation.** The main current legislation regarding Human Trafficking is covered under the Asylum and Immigration (Treatment of Claimants, etc.) Act 2004. There have been some difficulties at court throughout Operation Attwood and it is felt that in part this is due to the wording of the current legislation. The wording does not seem to accurately reflect the spirit of the offence and the original intention of the law makers (as expressed in the offence notes). The offence notes state that the legislation is intended to capture all elements of the trafficking chain, including harbouring (among others). However, in practice the wording of the offence seems to have been viewed with a narrow focus at court leading to the harbouring element being overlooked in favour of other elements not made out in the circumstances. In addition to this, the trafficking offence is not underpinned by a separate substantive offence; it refers to “exploitation”, which is not defined.
- **Banks.** Have really good POCA arrangements for reporting suspicious activity but very little training in human trafficking. Many accounts were opened with the same phone number and same person acting as interpreter, often at the same bank as another victim. Again, this is being shared through Gold for learning at the banks.
- **CPS.** The overall aim of all agencies involved is to conduct a streamlined, efficient and ultimately successful investigation. In order to stand the best

chance of achieving this, a very close working relationship with CPS is essential and early consultation.

It is important that there is a clear discussion between CPS and police regarding the strands of the investigation that need to be followed fully, balanced against the resources available, particularly when working within custody time limits. This needs to be coupled with very clear communication with the staff in the incident room about the need for those enquires that have been established as necessary.

- **Assistance available.** Slowly we are getting better at dealing with Human Trafficking and I would recommend;
 - UKHTC
 - NCA – regional advisors
 - Local community forums
 - HMRC
 - DWP
 - Red Cross
 - Salvation Army
 - GLA

All of the above have specific advisors for trafficking. I would urge all agencies to be involved and to take that help very early on in an investigation.

8. Conclusion

Human trafficking has been high on the agenda nationally and in the media. The harm it does in terms of human suffering, the proliferation of organised crime groups and the impact on communities is clear. The police service and other agencies need to respond effectively to reduce this harm. Failure to do so has potential reputational risks. Operation Attwood, and the force's wider response to the issues it highlighted attracted a lot of scrutiny, not just for the police but for other agencies as well. The close partnership working we achieved was outstanding. I believe that sustained, targeted and focussed partnership working

of this sort is undoubtedly the best way of minimising the harm of such offending and of mitigating some of the reputational risks involved.

Following Operation Attwood, the force's Gold Group sought ways to prevent incidents like this re occurring, so far this has led to:

- The force worked with Derby University Multi Faith Centre to share intelligence and to set up a Roma Advocacy Group.
- Operation Bruno was established to encourage Derbyshire Police to proactively look at a number of institutions in the City and try to map out where any of our issues were.
- An SIO handbook was developed and shared regionally to promote best practice.
- We have sought opportunities to raise awareness regionally and nationally and we have provided advice for the Modern Slavery Bill which aims to simplify the legislation.

In summary:

- Use a multi-agency approach,
- Use all the help that is available through other agencies,
- Build good working relationships
- Remember that operations of this sort have a range of positive outcomes – not necessarily prosecutions.

Most importantly, remember that it can be done!

T.I.E Practice: Terminology, Tactics and Training

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Abstract

This article details the findings of research commissioned by the National Policing Homicide Working Group (HWG) to capture current T.I.E practice and identify examples of good practice and areas where guidance and training for SIO's is needed. The research consisted of a Practitioner Focus Group with PIP 3 SIO's, consultation with HOLMES users and subject matter experts: NCA Behavioural Investigative Advisers, Approved Interview Advisers and the HWG. The paper concludes with the recommendation that a change in terminology to Trace, Investigate and Evaluate is required as this more accurately encapsulates what current T.I.E practice entails. In addition, tactical guidance and specific SIO training is needed to enhance knowledge of effective T.I.E strategy and action management.

Contents

1. Introduction
2. Findings from the T.I.E Practitioner Focus Group
3. Findings from the HOLMES User Group Consultation
4. Behavioural Investigative Advisers Contribution to T.I.E
5. T.I.E Investigative Interviewing Considerations
6. Recommendations for Future T.I.E Practice

Acknowledgments

References

Appendix: Suggested Format for T.I.E Report

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1. Introduction

Trace, Interview and Eliminate (T.I.E) enquiries are one of the cornerstones of many homicide and major incident investigations (Stelfox, 2015). The term T.I.E is an abbreviated instruction, a strategy and elimination process aimed at identifying groups of people, who theoretically are likely to include the offender (Cook and Tattersall, 2014). Once T.I.E subjects have been identified, enquiries are focused on eliminating those who cannot be the offender and implicating those who could. Those who cannot be eliminated, are subject to further enquiries aimed at establishing if there is material that would enable them to be raised to suspect status.

Other than enquiries aimed at tracing and arresting declared 'suspects', T.I.E actions tend to be the next most significant in terms of importance to an enquiry. They are also the most intrusive, resource and time consuming (Cook and Tattersall, 2014). It is therefore essential that SIO's have the knowledge and skills to develop and implement an effective T.I.E strategy and communicate this to the investigating officers tasked with carrying out T.I.E actions.

1.1 National Guidance

Major Incident Room Standardised Administrative Procedures (MIRSAP) (ACPO, 2005) sets out national standardised Major Incident Room (MIR) processes and terminology. MIRSAP details the HOLMES elimination recording criteria (Elimination codes 1-6) used to classify the outcome of T.I.E actions. The Murder Investigation Manual (MIM) (ACPO, 2006) and Core Investigative Doctrine (ACPO, 2005) provide generic guidance for SIO's on the T.I.E process. Both these guidance documents emphasise how a TIE strategy should be set by the SIO and explains how it is good practice to regard T.I.E subjects as being either implicated or eliminated from a T.I.E category, not as being the offender.

A T.I.E category is a group of people likely to share common characteristics with the offender. T.I.E categories should be bespoke to each investigation, based on the information available about the nature and circumstances of the offence. The

MIM (2006) states how “being in a T.I.E category does not mean that individuals are suspected of the crime, merely that the group is one which, in theory at least, could contain the offender” (pg 250). To comply with the Human Rights Act 1998 it has to be considered whether categories that lead to the inclusion of individuals as T.I.E subjects and any requirements of the elimination process are justifiable, proportionate and necessary. Cook and Tattersall (2014) therefore recommend that each T.I.E action should have a clear and transparent audit trail back to the information source and reasoning as to how and why the T.I.E action was raised. They also recommend that SIO’s provide inquiry officers with clear instructions as to how to conduct T.I.E actions.

1.2 Why is research on current T.I.E practice needed?

Research was commissioned by the National Policing Homicide Working Group (HWG) to develop an evidence base of current T.I.E practice for SIO’s. The research was needed because:

1. There is a lack of specific national guidance on T.I.E practice.
2. The SIO and training community have identified the need for guidance on T.I.E management.
3. Identifying effective T.I.E practice will assist in reducing investigative costs and resources.
4. The management of T.I.E’s has Human Rights implications (Human Rights Act 1998 - Article 8 right to respect for private and family life).
5. A lack of a national evidence base of current T.I.E practice has resulted in different terminology and processes being used which has implications for linked investigations.

2. Findings from the T.I.E Practitioner Focus Group

A Practitioner-led SIO Focus Group was held in April to capture SIO understanding and experiences of T.I.E management, identify examples of good practice and areas where guidance and training is needed. Representatives from the MPS, GMP, Suffolk, Essex, South Wales, PSNI and NCA attended. All attendees were PIP 3 SIO’s experienced in T.I.E management.

The key findings from the Focus Group related to two key areas:

1. Terminology
2. Process and Practice

2.1 Terminology

The term 'Person of Interest' (P.O.I) has entered the major crime investigation language and in some cases has replaced the term 'T.I.E subject' altogether (Cook and Tattersall, 2014). Discussion of terminology and current practice at the SIO focus group led to clarification of the use of the term P.O.I. There was unanimous agreement that the use of 'P.O.I' means the same as T.I.E as far as the process and status are concerned.

There was consensus that the terms Trace Interview and Eliminate no longer accurately reflect the processes involved. This led to new terminology 'Trace Investigate Evaluate' being proposed which the focus group suggested:

1. More accurately conveys the processes involved.
2. Removes reference solely to interview. The T.I.E process involves more than just interviewing an individual, it involves a range of tactical options and investigative strategies (e.g. search and seizure, taking samples and descriptions etc.) that are available to investigate a specified nominal in an enquiry. The term 'investigate' is more inclusive and covers any essential preparatory work required before any approach/interview is considered such as risk assessment and intelligence checks. The use of the term 'investigate' also encapsulates the range of investigative skills required when conducting T.I.E enquiries.
3. Removes reference to elimination. Current practice suggests that some SIO's are reluctant to set a T.I.E strategy because they have nothing to eliminate against. Elimination remains a vital part of the T.I.E process, however, the process involves more than just elimination. Investigative mind-set needs to go both ways; enquiries should be aimed at either implicating or eliminating a person from a T.I.E category. The term evaluate has a far less narrow-minded connotation (i.e. not just related to an elimination process). The term

'eliminate' is widely misunderstood as meaning 'eliminated from the enquiry' as opposed to a T.I.E category. Using solely the term 'eliminate' has also caused issues in the past when applying for RIPA authorities on T.I.E enquiries.

4. Emphasises the need to evaluate information gathered from investigations into particular individual(s), which fits with the PEACE model.
5. Aligns with the National Decision Making Model (College of Policing, 2014) in relation to risk assessment and evaluation.
6. Still fits with HOLMES acronym (i.e. T.I.E).
7. Also fits with T/I - which could be changed, subject to the views of the HOLMES User Group, to Trace/Investigate (as opposed to Trace/Interview).
8. Prevents any confusion in future as T.I.E currently has different meanings to some (i.e. Trace Interview and Eliminate or Trace Implicate or Eliminate).

The term T.I.E has not changed in the past 25 years, however, legislation and practices have. An advantage of the proposed new terminology is that it aims to eradicate confusion and enable more effective, comprehensive and focused enquiries. This is vital in the current climate of limited resources and reducing cadres of detectives.

2.2 Process and Practice

There was consensus that T.I.E is a valid and useful investigative process, part of the SIO's toolbox. However, focus group attendees emphasised the need for the terminology and technique to capture current practice. There was agreement that a lack of specific guidance on T.I.E has created some confusion and lack of standardisation in how T.I.E enquiries are carried out both by individual SIO's and across forces.

An issue was identified of SIO's not creating a T.I.E strategy or being reluctant to use a strategy because they have nothing to eliminate against. The focus group attendees all agreed that an SIO still needs to decide whether they need a T.I.E strategy or not. In some cases similar processes are utilised before a formal policy is ever drafted, e.g. in the 'golden hours' period. In others, a

suspect is quickly identified and an arrest made. However, if utilised, the T.I.E strategy needs to be recorded as a policy decision and effectively communicated to the investigation team and should remain dynamic, being updated/reviewed as the investigation progresses. Good practice was identified in ensuring that officers tasked with carrying out T.I.E actions record all relevant information gathered in the form of a T.I.E report. The T.I.E report should be bespoke to the specifics of the particular investigation. A suggested format for a T.I.E report can be found in the Appendix.

Case examples were provided of SIO's going too wide with T.I.E categories and difficulties arising with managing the T.I.E process. The focus group attendees recommended that this was an area where SIO's require specific guidance and training; how best to draw up T.I.E categories and keep them focused enough to avoid having too many T.I.E subjects to manage and allocate for action. The use of a scoring matrix can help prioritise when there are large numbers of T.I.E subjects (see section 4. Behavioural Investigative Advisers Contribution to T.I.E).

The focus group attendees also emphasised the need for legal aspects to be considered. For example, the impact of the decision to include searching the T.I.E's home/car/telephone must be carefully considered by the SIO and their detailed rationale for doing so recorded in the Policy File.

The key findings of the SIO Focus Group were presented to the HWG in July. The HWG were supportive of the proposed change in terminology and agreed further work was needed to capture the views of the HOLMES User Group.

3. Findings from the HOLMES User Group Consultation

A consultation questionnaire consisting of five questions about the T.I.E process and findings of the Practitioner Focus Group was circulated to HOLMES Regional User Group Chairs with a request to disseminate to regional HOLMES users. Twenty responses were received from the following force regions: North East, North West, West Midlands, Wales, South West, London, South, South East and

the Ministry of Defence (MOD). A summary of the responses to each of the five questions is provided below.

3.1 The MPS use the term 'Person of Interest' (P.O.I) in relation to T.I.E strategy. What is your understanding/experience of this terminology?

The responses received varied across force regions, ranging from them never having heard the term before to very different interpretations of what it means. There were a couple of worrying indications that 'P.O.I' is used to denote a potential suspect which SIO's do not wish to formally categorise as such. For example, one respondent commented:

"P.O.I is a term used for a group of subjects concerned in an investigation which the SIO doesn't want to call suspect. Although nominated as being responsible for the offence there is a lack of evidence to make them suspects as defined by law. A misunderstanding of investigation suspect management" (Respondent 4).

Respondents also commented on the ambiguity of the use of the term:

"I try to avoid the term 'P.O.I', as it is a rather ambiguous term and can create misunderstanding. In my opinion the use of the phrase can cause the investigation problems at court with the obvious implications if the 'person of interest' is not completely eliminated because they have not been given the appropriate focus in the investigation" (Respondent 11).

3.2 The consensus of the SIO focus group is that T.I.E remains a valid investigative process. What is your view from a HOLMES perspective?

All twenty respondents held the view that T.I.E remains a valuable and relevant investigative process. Many of the respondents commented on the importance of SIO's carefully managing the T.I.E process.

"I still think there is merit in T.I.E lines of enquiry and wouldn't want us to move away from this. It can be difficult to manage from a HOLMES perspective if the SIO criteria is too general and the parameters too wide. A good office manager

needs to get a grip of this from the onset and keep it on track, it can be very time consuming” (Respondent 2).

“From a HOLMES point of view a well worded T.I.E action will negate the need to raise multiple actions in relation to an individual under investigation. The action should reflect the T.I.E policy/strategy as agreed with the SIO and result in a comprehensive report and timeline covering the relevant times” (Respondent 5).

“From a HOLMES and investigation recording point of view there needs to be a clear identity of persons whose identities and actions within the crime must be accounted for, T.I.E does exactly this. Confusion comes from how they are dealt with and is determined by the SIO who decides which tactic is to be used to achieve best evidence. These are policy decisions which need to be recorded and the actions define how the tactics are progressed and managed” (Respondent 14).

One respondent commented how the way in which T.I.E information is translated into HOLMES is not always efficient.

“On smaller enquiries where we don’t employ a matrix the SIO will sometimes refer to T.I.E status within their policy logs but do not formally request that this is replicated within HOLMES. This is an identified learning point that HOLMES staff perhaps need to market HOLMES capability to the management team more effectively” (Respondent 17).

3.3 Legislation and practice has changed and the term Trace Interview and Eliminate no longer reflects the complex investigative processes involved. The SIO focus group has proposed a change in terminology from Trace Interview and Eliminate to Trace Investigate and Evaluate. What are your observations from a HOLMES perspective?

None of the respondents raised any HOLMES based technical objections to changing the terminology to Trace Investigate Evaluate. There was, however, a mixed response to the proposal. The majority of respondents thought that it was

a valid suggestion with one respondent commenting: *"I like the new T.I.E acronym, it explains better what we do with the subjects"* (Respondent 2).

HOLMES Users also expressed how implementation of the new terminology would make it easier for SIO's to explain the T.I.E process at Court and was demonstrably more proportionate in terms of the Human Rights Act 1998.

'Investigate' and 'evaluate' are much more pragmatic and useful words to use. It is often not practical to interview and if you do you are then faced with the moral or legal dilemma of should you really be affording the individual necessary protections, basically are they a suspect? By using the word 'investigate' instead allows the SIO and investigators to adopt the correct mind-set and once they reach a point where they are able to 'interview' they will be in a better position as to how to treat that individual and not fall into traps that may be present. Finally, 'evaluate' avoids defence barristers love of semantics and prevents the problems that 'eliminate' causes where a person simply cannot be completely eliminated for whatever reason" (Respondent 4).

A minority of respondents expressed the view that changing the terminology was semantic and could add to the existing confusion of Trace Interview Eliminate and Trace Implicate/Eliminate. However, the few respondents who expressed this view emphasised how it was the business process underling T.I.E actions and SIO's understanding of this which was essential with the need for *"a comprehensive report/timeline identifying when an individual can or cannot be alibied and by what method"* (Respondent 5).

Overall, the views expressed were supportive of the idea that 'investigate' and 'evaluate' removed ambiguity and more accurately reflected current practice.

"This sounds good and mirrors in part our current practice whereby a T.I.E enquiry is assessed by the SIO or Deputy with a covering report and a copy file of all material registered as a Document in its own right with the SIO comments endorsed on it" (Respondent 1).

3.4 Anecdotal evidence suggests that SIO's are often reluctant to set T.I.E strategies. What is your experience?

There was a mixed response to this question across force regions. Some respondents reported no problems with others stating that SIO's are reluctant possibly as a consequence of not fully understanding the importance of a well-defined T.I.E strategy.

"I agree that SIO are reluctant to set T.I.E strategies, or are not always clear in their T.I.E strategy. I believe this could be because they do not want to eliminate anyone too early from their enquiries. That is why I think evaluate is a better word to use, then the SIO can evaluate the evidence provided by their teams as early as possible in the investigation and may find it easier to set T.I.E strategies" (Respondent 15).

"The current wording 'Trace, Interview and Eliminate' does seem to cause some reticence for SIO's when considering using the T.I.E process. One of their concerns is that there is a belief that by making a person subject of a T.I.E action that they are labelling them as a potential suspect. Then if the case progresses to trial then any T.I.E nominals that have not been fully eliminated will cause doubts in the minds of the jurors" (Respondent 11).

3.5 Any other observations from a HOLMES user perspective on the current understanding and application of the T.I.E process and how it might be improved?

The dominant theme in the responses to this question was the need for national SIO training on the T.I.E process due to a lack of understanding generally of the relevance and importance of the T.I.E and elimination processes, management within HOLMES and current lack of national consistency in the use of T.I.E.

"The issue lies with SIO training and the fact not a lot of SIO's have any HOLMES experience. If they were given a better input on HOLMES and how the room works it might improve the T.I.E situation slightly" (Respondent 2).

"The Murder Manual adequately describes the importance of developing and implementing the T.I.E business process in Chapter 19.3 and 19.4, clearly the SIO Development Programme and National HOLMES Training are necessary to deliver the message" (Respondent 7).

"The T.I.E actions should comprehensively cover what is required and what investigative tools should be used. Simply saying T.I.E an individual is not good enough" (Respondent 5).

"Clear strategies need to be set out with regard to the T.I.E process and this needs to be observed by all police forces so nationally everyone is working the same. As it stands at the moment, if an enquiry were to be linked between two or more Police Forces, T.I.E could be looked at differently by each force, as practices do change as technology advances" (Respondent 15).

To further build the evidence base of current T.I.E practice for SIO's, input was sought from the National Crime Agency (NCA) Behavioural Investigative Advisers (BIAs) to capture their role in the behavioural interpretation of an offence to assist SIO's in generating and prioritising nominals and advice from the nationally Approved Interview Advisers regarding key considerations for interviewing T.I.E subjects.

4. Behavioural Investigative Advisers Contribution to T.I.E

4.1 The Role of the Behavioural Investigative Adviser (BIA)

BIAs have become an integral part of major crime investigation. The role of the BIA emerged from that of the 'offender profiler' and includes the provision of a range of services to major crime investigation (Rainbow and Gregory, 2011). BIAs are part of the NCA's Crime Operational Support, a specialist advisory team, providing free support and guidance to UK Policing.

In complex homicide investigations, linked series sexual offences and predatory stranger rapes, there will often be a degree of uncertainty, not just in terms of the likely offender and their background, but in the circumstances in which the

offence(s) took place, the sequence of events, the underlying motivation and the implications of these for the generation and prioritisation of nominals. BIAs have a key role to play in enhancing the SIO's understanding of the offence and in providing advice as to the most likely characteristics of the unknown offender. Both of these aspects are crucial when considering an effective T.I.E strategy.

The following services provided by BIAs are particularly relevant to the potential contribution of the BIA to the T.I.E process:

- **Crime Scene Assessment** – working out how an offence occurred, the likely sequence of events, decisions made by the offender, the role of the victim and the impact of the environment in which the crime took place. This provides the building blocks to understanding the offence and in turn the offender, from a behavioural perspective.
- **Hypothesis Generation/Prioritisation** – the identification and subsequent prioritisation of possible offence scenarios. Assessing which hypotheses are most consistent with the behavioural interpretation of what has occurred and how.
- **Predictive Profiling** – outlining the most likely background characteristics of an unknown offender based on the findings of the crime scene assessment. Predictions are made based upon an objective interpretation of the available data, a process which combines the experience of the BIA with relevant research and statistical data.
- **Prioritisation Matrices** – converting 'profiling' advice into a simple matrix structure that allows individuals to be ranked according to how well they score across a number of predicted categories, each of which is given a numerical value or weighting. This process is specific to the offence being investigated, with the categories created based on BIA experience and relevant research and statistical data. Aspects such as geographical association, criminal history and some of the more reliable aspects of physical description such as age and ethnic appearance would be assessed cumulatively to identify those most deserving of further scrutiny. The more points an individual scores, the higher they will be ranked relative to other nominals.

4.2 The BIA perspective on current T.I.E practice

Recent discussions with NCA BIAs has identified a number of common observations regarding the T.I.E process and the potential role of the BIA in this process. These are summarised below:

- A lack of consistency in terms of how many nominals should ideally be generated as T.I.E subjects.
- Difficulties in knowing how to generate nominals who may be categorised as T.I.E's.
- A confusion between the generation of T.I.E categories and the generation of 'nominal pools' from which T.I.E's may be drawn.
- A reticence to generate too many T.I.E's resulting in overly restrictive criteria being used and potential suspects being missed as a result.
- Difficulties in knowing how to prioritise nominals most deserving of T.I.E status.
- A desire to prioritise the T.I.E categories themselves rather than the nominals within them.
- A lack of understanding in relation to how BIA's can assist SIO's in the development of T.I.E strategy.
- A lack of integration of the services and advice provided by BIA's to the T.I.E process.

Fundamental to the T.I.E process is an assumption that T.I.E's will be generated based on them 'fitting' in some way with the 'kind of person' who may be responsible for the offence. Given that BIA's have been specifically trained to understand offending behaviour and make links between this and what it means for the 'type of person' the offender is likely to be, the inclusion of BIA's in the development of T.I.E strategy seems only sensible.

The effective integration of a BIA during the development of T.I.E strategy should help to minimise many of the issues highlighted above. The early invitation for NCA Crime Operational Support to assist an SIO with their ongoing investigation is therefore recommended¹.

¹ NCA Crime Operational Support can be contacted via the Specialist Operations Centre on 08450 005463

Although the involvement of a BIA in the whole T.I.E process (and indeed the investigation more broadly) is advocated as good practice, it is specifically in the areas of nominal generation and nominal prioritisation where BIA's have particular expertise of relevance to T.I.E.

4.3 How can a BIA assist with nominal generation?

From a BIA perspective, effective T.I.E categories should be derived from the proactive identification of groups or categories of nominals within which the suspect is likely to be found, based upon the specifics of the case. This process is dependent on two key elements:

1. An objective assessment of the offence in terms of how and why it has occurred.
2. The accurate prediction of the likely characteristics or background of the unknown offender.

Without these two elements, an SIO is left to rely upon generic T.I.E categories rather than making them bespoke to the specifics of the offence being investigated. The BIA services outlined, specifically Crime Scene Assessment, Hypothesis Generation/Prioritisation and Predictive Profiling are perfectly suited to assist the SIO to develop effective T.I.E categories.

Clarity regarding the nature of the offence itself (emerging from a BIA Crime Scene Assessment) may give rise to T.I.E categories directly. For example, if it is thought that the offender has specific knowledge of, or interest in the victim, i.e., a targeted attack. Or that the offender and victim are likely to be known to each other, categories such as 'males who knew the victim was going to the park after work', 'previous sexual partners', or 'burglars with line of sight of the victim's address', etc., may be relevant. Other more specific or idiosyncratic aspects of behaviour evident in the offence may lead to further bespoke T.I.E categories being suggested by the BIA, which are unlikely to have been within the scope of the investigation otherwise. For example, the position of the victim's clothing and the potential for the offender to have deliberately posed the

body may be suggestive of a sexual element. The location and clustering of stab wound injuries to the victim may be suggestive of military training or may perhaps be more consistent with a delusional belief system indicative of potential mental health issues. The translation of such inferences into related T.I.E categories can often be a fairly straightforward process.

Further T.I.E categories may sometimes be derived rather more indirectly. Broad parameters emerging from the BIA Crime Scene Assessment can often be used to create larger nominal pools, within which a degree of prioritisation can be undertaken in order to highlight a smaller number of actual T.I.E subjects who satisfy multiple criteria. For example, 'all burglars', or 'all males residing alone' within a particular police division could be identified and PNC checks carried out to highlight further salient factors such as other relevant convictions, age, etc.

This indirect approach is particularly important because it eliminates the need for SIO's to set overly restrictive criteria when setting T.I.E categories. Generating larger pools of relevant nominals and then prioritising within them in order to identify those most deserving of T.I.E status minimises the issue of filtering out potential suspects without even subjecting them to the most cursory level of research.

4.4 How can a BIA assist with nominal prioritisation?

An objective way of prioritising nominals is fundamental to the T.I.E process. Recent BIA experience has highlighted how SIO's can sometimes struggle to identify appropriate T.I.E categories. In some instances, the categories will be overly restrictive, generating only small numbers of nominals which may well not include the offender. Or conversely, be too broad, in an attempt to 'cover all bases', resulting in an unmanageable number of T.I.E's. Alternatively, the T.I.E categories generated may simply not be consistent with a behavioural interpretation of what is most likely to have happened and why, resulting in the identification of groups of nominals with characteristics unlike those of the actual offender.

The involvement of a BIA will assist the SIO in the development of objective and valid T.I.E categories. It will also enable the net to be cast wider initially to maximise the chances of including the offender. BIAs are highly experienced and very comfortable working with large datasets within which nominals of particular interest may be prioritised. Indeed, this is precisely the purpose of the BIA 'Prioritisation Matrix' product described earlier.

BIAs can work with SIO's to agree on potentially large pools of individuals that could be generated. For example, all males aged 18-35 on the estate, all sex offenders in the county, all owners of white vans within 30 miles and so on, on the basis that they will then be prioritised through the use of a BIA Prioritisation Matrix to identify only those individuals who score highly enough to warrant consideration as a T.I.E subject.

An objective matrix based prioritisation of all nominals within all T.I.E categories can also often be achieved in this way, rather than trying to give weightings or some priority order to the T.I.E categories themselves. Giving priority to a particular T.I.E category irrespective of the background characteristics of those nominals within it is unlikely to provide an SIO with the most effective means of differentiation and prioritisation between T.I.E subjects. A more holistic assessment of those individuals within any of the T.I.E categories is more likely to identify those who should be considered as a priority by the SIO.

5. T.I.E Investigative Interviewing Considerations

The views of the cadre of Nationally Approved Interview Advisers were sought at a meeting chaired by the National Interview Adviser, Gary Shaw, in July. The Nationally Approved Interview Advisers are experienced practitioners who actively advise SIO's on the development of significant witness and suspect interviews. The advisers consist of officers/staff from the NCA, Durham, GMP, MPS, West Midlands, Cambridgeshire, West Yorkshire, Wiltshire and South Wales. They also research and develop contemporary subject matter within the field of investigative interviewing on behalf of the National Investigative Interviewing Group led by Chief Constable Creedon. To ensure effective

interviewing working practices, the group circulate advice in the form of positional statements to assist both operational practice and training. These positional statements are disseminated to all forces and are available through the College of Policing.

There was unanimous agreement from the Nationally Approved Interview Advisers that the proposed change to current terminology from Trace Interview and Eliminate to Trace Investigative and Evaluate was an effective way of explaining exactly what the T.I.E process entails.

The Interview Advisers provided several examples of both effective and ineffective practices concerning the management of T.I.E. subjects. The following areas were identified as being worthy of consideration for inclusion in a guidance document to assist the development of consistent T.I.E. practice.

- The need to appoint an Interview Adviser at the earliest opportunity to assist in creating the interview strategy (see section 5.1 Key Considerations for Interviews with T.I.E. subjects) and interview plan for T.I.E. subjects (who are in essence significant witnesses and key individuals).
- The importance of the identification of the relevant time parameters concerning a T.I.E's movements to assist in the interview plan.
- The importance of capturing either a visual/audio recording of the interview of a T.I.E. subject.
- The importance of treating certain significant witness interviews as though they had been categorised as a T.I.E. subject, especially during the early stages of an investigation.
- The importance of clear direction from the SIO about the interview product required.
- The importance of a review of the investigative material gathered during the interview of a T.I.E subject.
- The importance of a review of the final investigative product produced.
- The importance of an effective debrief of the officer/staff who conducted the interview of a T.I.E subject.

- The importance of clearly documented rationale concerning the change of status from T.I.E subject to suspect around the timing of investigative interviews.
- The importance of the need to continually re-evaluate the T.I.E interviews in light of further information as the investigation progresses.
- The importance, in the light of a subsequent prosecution, of the need to review the T.I.E interviews with reference to case presentation.

5.1 Key Considerations for Interviews with T.I.E Subjects

When deciding on the most appropriate course of action in preparing an interview strategy for a T.I.E subject the following are suggested by the Nationally Approved Interview Advisers as key areas for consideration.

1. Interaction with the T.I.E subject from point of initial contact up to the commencement of the interview must be considered because this can prove essential in creating a working environment in which the subject if they choose to do so feels able to provide an accurate and reliable account.
2. The creation of a structured interview plan for use within the interview itself is an integral part of the T.I.E strategy.
3. Identifying the relevant time parameters of the offence and the interview aims and objectives will help in the construction of the interview plan.
4. The appointment of an Interview Adviser to assist in developing and coordinating the overall interview strategy should be actively considered.

In developing an approach to interviewing T.I.E subjects it will prove useful to consider the following:

- **Witness Categorisation** - The category afforded to the witness needs to be established and recorded. This will in turn assist in identifying the interview product that is to be obtained (e.g. visual recording or witness statement). It must be clear that at this stage the T.I.E subject is a witness and not a suspect and therefore there is no requirement to caution them. Similarly, they are not a voluntary attender although they may be at a police station

and this process should not be followed. The Achieving Best Evidence (ABE) Guidelines and 2015 guidance on The Structure of Visually Recorded Interviews with Witnesses should be adhered to.

- **Interview Aims and Objectives** - It is essential that the aims and objectives of the interview are clear and are communicated to the interviewers.
- **Timing of the Interview** - When the interviews are to take place must be carefully considered.
- **Location of the Interview** - The appropriate location should be selected in line with the needs of the investigation at the current time.
- **Interviewing Officers** - The identification of appropriate officers in line with the overall strategy needs to be considered.
- **Body Worn Video** - If body worn video footage has been used during the initial contact stage with the T.I.E subject then this must be reviewed at an appropriate point prior to the interview being concluded to ensure that all relevant investigative material has been gathered.
- **Interview Recording** - How the interview is to be recorded needs to be in line with current legislation and national guidance.
- **Fitness to be Interviewed** - Careful consideration needs to be given to the T.I.E subject's fitness to be interviewed. If there are any concerns surrounding fitness to be interviewed advice should be sought and national guidance followed.
- **Interview Supporter** - The role of an interview supporter must be clear to all present within the interview.
- **Legal Adviser** - If the T.I.E subject requests a legal adviser is present at the interview then the exact nature of their attendance and role within the interview must be clarified.
- **Interpreters** - If the services of an interpreter are to be utilised then it is important to consider the exact language of the witness to ensure correct selection of the interpreter. The interpreter should be briefed on what is expected from them prior to the interview taking place.
- **Change in status** - Any decision to change a T.I.E subject's status to that of suspect must be carefully considered and be based on investigative material that has been reviewed to ensure accuracy.

Interview Plan and Strategy

The purpose of the interview needs to be clear to ensure that the identified aims and objectives are achieved. A structured interview plan is essential in the planning and preparation process. In preparing the interview plan, the following areas will assist:

- The relevant time parameters surrounding the commission of the offence will assist in focusing the interview and assist in determining the elimination or otherwise of a T.I.E subject from that category.
- The wider investigative areas that require additional questioning should be established.
- Adequate planning and preparation time for the interviewer needs to be realistic and take into account the needs of the investigation.
- Following on from the discussions and decisions made following these considerations then the appropriate strategies and interview plans can be formulated.

Based on the experiences of the Nationally Approved Interview Advisers, findings from the SIO Focus Group, HOLMES user's responses and consultation with the HWG, the National Investigative Interviewing Group are currently developing a positional statement detailing good practice guidelines for interviewing of T.I.E subjects to support the work being undertaken by the HWG and Homicide Practitioner's Research Group. The positional statement will be circulated to all forces and incorporated in future SIO Training and Learning and Development CPD events.

6. Recommendations for Future T.I.E Practice

The findings of the T.I.E research detailed in this paper highlight how there is a clear need for a change in terminology to Trace Investigate and Evaluate and the development of operational guidance for SIO's on T.I.E strategy and management to bring clarity, standardise the process, increase knowledge and understanding and focus SIO's mind-set on the processes involved. It is,

therefore, recommended that this work is incorporated within the ongoing work being carried out by the College of Policing to update MIM and MIRSAP. Ensuring that specific T.I.E guidance is enshrined in Authorised Professional Practice (APP) will provide an agreed national evidence-base from which PIP 3 SIO Training on T.I.E processes and practice can be developed and delivered.

Acknowledgments

Our thanks go to the SIO's who attended the Practitioner Focus Group, the HOLMES Users who provided detailed responses to the consultation questionnaire, the NCA BIAs and Nationally Approved Interview Advisers for their valuable input in developing an evidence base of current T.I.E practice detailed in this article.

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Appendix

Suggested Format for T.I.E Report

1. Reason why nominal is a T.I.E

2. Antecedents

- Relevant antecedent history e.g. links/associations with victim, previous similar MO
- PNC/PND Check
- NICHE Check

3. Movements during relevant times and whether verified

4. Association with victim including recent contact

5. Alibi - details and verification

6. Behavioural pattern prior to incident

7. Forensic

- DNA sample obtained
- Fingerprints obtained
- Is there any forensic evidence to link T.I.E with victim, scene?

8. Inconsistencies

- Are there any significant inconsistencies in individual accounts of events prior to, or after the incident?

9. Motive

- Did the nominal have a motive?

10. Opportunity

- Did the nominal have the opportunity to commit this crime?

11. Means

- Did the nominal have the means to commit this crime?

12. Offending History – Number and types of previous convictions

- Brief outline of number and types of previous convictions

13. Conclusion

- Observations on implicating and eliminating factors and verification
- Signed and dated by officer who has completed the report

14. SIO Opinion/Decision

- Elimination codes should be considered once enquiries are completed
- TIE actions should be checked methodically and thoroughly by the SIO and signed and dated.

Analysis of Photo Response Non-uniformity (PRNU)

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Abstract

In 2012 Samsung estimated that 2.5 billion people worldwide had a digital camera. Most are embedded in mobile phones but they are also found in tablets, laptops and other devices as well as in conventional cameras. Their widespread availability and mobility has meant that many criminal events or other situations of interest to investigators are now captured on camera by offenders, witnesses and victims. In many cases, these images and the cameras that took them form a significant part of the material gathered by investigators. In some cases, it is important to show that a particular image was taken by a known camera, and the analysis of Photo Response Non-Uniformity (PRNU) provides a reliable forensic technique to achieve this.

This article describes the PRNU procedure developed by the Metropolitan Police Forensic Services' Department of Digital, Cyber and Communications and illustrates how it was used in Operation Heronbay to show that images linked to the murder of 12 year old Tia Sharp were taken by a camera which could be attributed to the offender Stuart Hazel.

Contents

1. Introduction
2. Photo Response Non-uniformity
3. Case Study – Operation Heronbay
4. Conclusion

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1. Introduction

Since their invention in 1975 by Kodak, digital cameras have become part and parcel of our everyday lives. Their compact size means that they have not been confined to conventional camera uses and most are now found in mobile phones, tablets and other devices. Their use in mobile phones, which many people have with them most of the time, means that events that are of interest to investigators are often captured as digital images. In other situations, such as the case study in this paper, offenders may take souvenir images which can become highly incriminating if they can be linked to a camera attributed to the offender. The analysis of Photo Response Non-Uniformity (PRNU) provides a reliable forensic technique by which this can be achieved and this article describes the PRNU procedure developed by the Metropolitan Police Forensic Services' Department of Digital, Cyber and Communications. The case study of Operation Heronbay shows how PRNU was used to link images related to the murder of 12 year old Tia Sharp to a camera which could be attributed to the offender Stuart Hazel.

2. Photo Response Non-Uniformity (PRNU)

Analysis of Photo Response Non-Uniformity (PRNU) is widely accepted in the scientific community as a reliable forensic analysis technique for identifying the source camera of digital images. The technique works for dedicated digital cameras or cameras embedded into other devices such as mobile phones. The pioneering research to develop source camera identification was conducted by Lukas et al in 2005 (Lukas et al. 2005), and the technique, which has since been widely studied by academics and forensic scientists (e.g. van Houten, 2008; Khanna et al., 2009; Goljan et al., 2009; Nordgaard and Hoglund, 2011; Cooper, 2013), has been used successfully in a number of investigations and tested and accepted in UK courts.

Digital cameras work by focusing the light from a scene onto millions of individual pixels on a camera sensor, each of which records the light level for its tiny section of the picture. The intensity of light at each pixel is measured on a

numerical scale which is usually from 0 to 255. This numerical information is stored as a digital image file and can be copied and shared without loss of information.

PRNU noise is inherent in all digital images and is the result of slight differences in the dimensions and electrical properties of individual pixels in camera sensors, due to tolerances in the manufacturing process. This means that for a given light level, slightly different values will be recorded by different pixels resulting in a noise pattern that is fixed over time for a given sensor. There are millions of pixels in each camera sensor, and the distribution of variation is random, which makes it extremely unlikely that the PRNU noise profile is the same in any two camera sensors: in practice the PRNU noise profile of a given camera sensor can be considered to be unique. This has been tested and confirmed by a number of researchers including Goljan et al (2009) who conducted a large scale camera identification test involving over 3 million pictures from around 7000 cameras. The uniqueness of a camera's PRNU profile, together with the fact that it is fixed over time, and the ability to extract PRNU patterns from digital images, provide significant opportunities for forensic image analysis.

A number of techniques are available for establishing the PRNU noise profile of a camera sensor and for extracting PRNU profiles from images. The technique used by the Metropolitan Police in the case study that follows was developed by Dr Alan J Cooper, who until his recent retirement was a Senior Digital Forensic Practitioner in the Metropolitan Police's department of Digital and Electronic Forensic Services (now known as the Forensic Services' Department of Digital, Cyber and Communications). His method significantly improved the discrimination between matching and non-matching sets of images, leading to more accurate results and a significantly greater level of certainty in the findings.

When a camera and a digital image are submitted for PRNU examination, the following steps are taken:

- Firstly, the PRNU profile of a camera sensor (informally known as the camera's PRNU *fingerprint*) is established by averaging PRNU patterns

extracted from a large number of bright smooth test images (e.g. of a plain white surface).

- Secondly, a PRNU pattern extracted from a questioned image is compared with the camera's PRNU profile to obtain a level of correlation between the two.
- Thirdly, a range of sample images is produced from the camera under investigation and each sample image compared with the camera's PRNU profile to produce a distribution of known matching correlation values.
- Fourthly, a range of sample images is obtained from similar cameras, ideally of the same make and model as the camera under investigation, and each is compared with the camera's PRNU profile to produce a distribution of known non-matching correlation values.
- Finally, the correlation value obtained for the questioned image is compared with the distributions of values for matching and non-matching images to establish the strength of support for the proposition that the image was taken with the suspect camera. This is done by way of a likelihood ratio (LR).

These steps are summarised in figure 1.

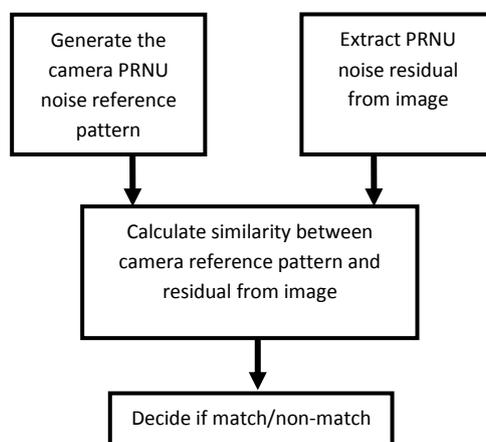


Figure 1: summary of the identification process.

Provided that the camera is available to the forensic examiner for test images to be produced, the PRNU profile of the camera sensor can be well established. However the PRNU extracted from a questioned image can be affected by a range of factors such as the amount of detail and the brightness of the image and the camera's ISO (light sensitivity) setting. Factors such as these may

weaken the level of PRNU that can be extracted, thereby reducing the level of correlation with the camera's PRNU profile. In some cases PRNU from an image may appear not to match the PRNU profile of a camera, even when it was in fact taken with that camera. For this reason forensic practitioners are unlikely to ever exclude the possibility that a questioned image was taken with a particular camera on the basis of non-matching PRNU alone. False positives, where an image is mistakenly attributed to a camera, are highly unlikely because a high correlation would not occur if the PRNU of the image was corrupted. Cropped images are not suitable for PRNU comparison because the images used to produce the camera's PRNU profile are not of the same size and shape and corresponding pixels cannot be correctly compared.

In 2010 and again in 2013 the Metropolitan Police Digital and Electronic Forensic Services (DEFS) successfully participated in European Forensic Science Institutes (ENFSI) administered proficiency tests on the use of the PRNU source camera identification technique for forensic examination (van Houten and Geradts, 2010). The laboratory has developed the PRNU analysis software used for this examination using Mathworks Matlab (version R2012b) and its performance has been benchmarked against the National Forensic Institutes (NFI) "PRNU-Compare 0.75" software.

Image to image PRNU comparison, i.e. when the camera is not available for examination may be possible in some circumstances, but typically leads to much lower correlation values and therefore a lower strength of evidence. Future research in PRNU at the Metropolitan Police is planned to involve PRNU comparison of video material.

To be accepted in court, PRNU analysis must only be carried out by suitably trained specialists who can understand the underlying issues and use derived probabilities and statistics to interpret the results in an evidential way.

The process has been used in court by the Metropolitan Police and the following case study illustrates how it can be used in an operational situation.

3. Case Study – Operation Heronbay

The Metropolitan Police Operation Heronbay was the enquiry into the disappearance and murder of 12 year old Tia Sharp at The Lindens, New Addington, Surrey (London Borough of Croydon) in the second week of August 2012.

Operation Heronbay shows the value of the PRNU technique in those cases where investigators want to establish if an image was taken with a particular camera. There were many facets to this investigation but the focus here is solely on the PRNU work and the contribution it made to the case.

Tia Sharp was staying with her grandmother, Christine Sharp and her grandmother's partner Stuart Hazel. On Friday 3rd August 2012, she was reported to the Metropolitan Police as a missing person. Stuart Hazell appeared to be the last person to see her that day. He told the police that she had left the house about lunchtime to go shopping and had not returned.

In the early stages, the incident was dealt with as a missing person enquiry with no major fears that Tia had come to harm. However, as time passed the level of concern increased and the enquiry escalated. There was extensive CCTV work focused on the transport network and the shopping area Tia was thought to have travelled to, large scale searches were carried out and specific lines of enquiry focussing on the possibility of family involvement or a stranger abduction were followed.

Tia's disappearance coincided with the London Olympics and the search for her in the city where the Olympics were being held generated major media interest.

Tia's home was searched on a number of occasions without result and a plan was formulated to carry out an extensive forensic examination of it to identify if she had come to harm at that address. This required the re-housing of the family and their numerous pets and it was whilst this was being organised that a Family Liaison Officer noted a smell of decomposition when they were on the

upstairs landing. About this time, it was also established that Stuart Hazell was missing.

The forensic examination of the premises located Tia's body in the loft on the 10th August. It was wrapped in a fitted sheet with a roll of black bin bags wound round the body. The clothing and glasses that Tia was last seen wearing were also found separately concealed in the loft space. Stuart Hazell was quickly located and he and Tia's grandmother were arrested the same day.

The search of the house continued for another three weeks and a number of key items were recovered, these included:

- A Sony digital camera from a kitchen drawer,
- A memory card found concealed within a crack in the door frame on the inside of a ground floor cupboard.

An initial examination of the memory card revealed that most of the contents had been deleted but extensive work by the Metropolitan Police Digital and Electronics Forensic Service restored most of the missing information. The card revealed the following:

- extensive pornography (all deleted images) including 2 grade one images (young underage girls) and 2 obscene images (bestiality),
- 11 still images of Tia sleeping,
- 3 video clips of Tia sleeping in her bedroom
- an image of a young naked girl lying on Tia's bed,
- a number of professional type pornographic photos with young teenage girls wearing glasses whilst performing sexual acts.

The key image was that of the young naked girl on Tia's bed. She was in an "all fours" position facing away from the camera in a sexual pose. The pathologist, when asked if this could be Tia, remarked that not only was the physical development consistent with a female of Tia's age, he was also concerned that in his opinion, the female was deceased when the picture was taken.

Hazell was known to use the camera and fortunately some of the other images were of his own phone screen showing pornographic images, but it was considered vital to show that this picture was taken on the recovered camera and also to sequence the images.

The images and the camera were submitted to the Metropolitan Police Digital and Electronics Forensic Service (DEFS) for PRNU examination. To illustrate the process, the following quotes in italics are taken directly from the DEFS Report AC/1/REP which was provided to the SIO in Operation Heronbay. The paragraph numbers are as they appear in the original report.

The requirement was:

1.2.1 It was requested by Operation Heronbay that the laboratory examine an image file _SC02494 (image of naked female on a bed) that had been recovered by Computer Systems Laboratory from memory card DJC/89 (contained on disc SJF/298) with a view to establishing if this image had been taken with the Sony Cybershot digital camera identified as DJC/194. Later it was requested that further images be examined for the same purpose: SC02435 to SC02445 inclusive and a number of jpeg stills recovered from video clips.

The material was assessed and only two images were found to be suitable for PRNU examination. These were SC02494 (image of naked female on bed recovered from memory card DJC/89) and SC02435 (image of sleeping female recovered from memory card DJC/89).

The report then explains the principles of PRNU and the statistical methods used before moving on to the examination of the material in this case, which is explained below.

3.2.2. A PRNU source profile ('fingerprint') was produced from the average value of the estimated PRNU noise taken from 464 smooth images produced on

the Sony Cybershot DSC S930 evidence camera DJC/194 (using the native resolution of 3648 x 2736 pixels).

- 3.2.3 *In order to generate a known matching distribution of correlation values, a total of 548 random indoor images were produced using the Sony Cybershot DSC S930 evidence camera DJC/194 (camera settings: auto, flash auto, zoom off).*
- 3.2.4 *To produce a known non-matching distribution that reflects a probability distribution by chance, 10 of the same make and model cameras (Sony Cybershot DSC S930) were purchased. A total of 1532 indoor image samples were produced by these 10 cameras.*
- 3.2.5 *It is good forensic practice where possible to make samples 'like for like' and so the image samples were made with the all cameras set in the same mode as that indicated by the EXIF data for the images under examination. EXIF data (Exchangeable Image File Format) is information about the image and camera settings which are stored along with the image itself. The EXIF data indicates that for both the images under examination, they were taken with the camera mode set to auto (camera automatically selects shutter speed, F number and ISO rating) and the focal length set to minimum 6.4mm (no zoom). For image _SC02494 the flash had been set to auto and had fired; for image _SC02435 the flash had been set to off. For all the samples made the flash was set to auto, which meant the camera itself decided if a flash was required for the particular lighting conditions of the subject matter.*
- 3.2.6 *The PRNU target and source profiles can only be compared if they have been produced using the same image size. Both images under investigation were produced at the native (highest: 3648 x 2736) resolution of the camera; therefore all sample images have been produced at this resolution.*

Section four of the forensic report presents the results of the examination at a level of technical detail which would enable another forensic scientist to review and evaluate the work done. It firstly shows the distribution of correlation values for the 548 known matching images taken with DJC/194 (section 3.2.3 above) and the 1532 known non-matching images taken with the purchased cameras (3.2.4 above). Statistically there was a large discrimination between these two data sets.

It is then shown that the correlation values for the target PRNU profiles derived from both images, SC02494 and SC02435, were within the distribution of correlation values for images known to be taken with DJC/194 and not within the distribution of values for non-matching images.

The report then presents its conclusions in section five:

5.1.3 Overall, the results of the examination show conclusively that the PRNU target profiles obtained from images _SC02494 (naked female on bed) and _SC02435 (sleeping female) are a match to the PRNU source profile obtained from the Sony Cybershot DSC S930 camera identified as exhibit DJC/194. Considering that PRNU noise patterns are a unique identifier for a specific camera sensor then it must be concluded at the highest level that both images have been produced by the Sony Cybershot DSC S930 camera identified as exhibit DJC/194.

What the above shows is that, although not all of the images originally submitted were suitable for PRNU examination, SC02494 (naked female on bed) and SC02435 (sleeping female) were, and PRNU showed that they were taken by the Sony camera found at the scene. Furthermore, it was possible to show that SC02494 (naked girl on bed) was the last image taken by the camera. Given that the camera could be connected to Stuart Hazell, this provided highly significant evidence of his involvement in the murder of Tia Sharp.

The trial of Stuart Hazell began on 7th May 2013 and, unusually, the images were shown in open court during the trial. This was clearly significant in

persuading him to change his plea to guilty, which he did on 13th May. He was subsequently sentenced to life imprisonment with a minimum term of 38 years.

4. Conclusion

PRNU provides SIOs with a powerful technique to match images to digital cameras. It has its limitations and it will not be successful in every case, but as the Tia Sharp case shows, it is capable of providing highly significant evidence.

The procedure described here is the one developed and used by the Metropolitan Police Forensic Services' Department of Digital, Cyber and Communications. Other forensic providers may use different techniques and SIOs should consult their forces' forensic provider to establish whether they are able to provide the analysis in individual cases. If the service is not available locally, SIOs can contact Rob Mathews, Relationship and Development Manager, Metropolitan Police Forensic Services' Department of Digital, Cyber and Communications on 020 32762016, email rob.mathews@met.pnn.police.uk who may be able to offer assistance. Provision of services for external agencies is a limited resource and as such subject to an acceptance criteria based on the seriousness of alleged offence (only available for serious offences), complexity, proportionality and current capacity. If accepted and work is carried out then the MPS is permitted to recover costs incurred for performing work on behalf of external parties.

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The David Guilfoyle Murder Investigation

Detective Superintendent Paul Withers, Lancashire Constabulary (SIO)

Detective Chief Inspector Andy Hulme, Lancashire Constabulary (Deputy SIO)

Abstract

The investigation of the murder of David Guilfoyle by Lancashire Constabulary started as a missing person report and resulted in a no-body murder conviction. The offender, Shane Fitzpatrick, made no comment during police interviews and pleaded not guilty at his trial. Convictions under these circumstances are obviously difficult for families as they do not know either the reasons for the crime or the location of their loved ones body.

In this case, the police were contacted by Fitzpatrick from prison some seven years later with an indication that he now wanted to admit to the offence and assist in locating the grave where he had buried David Guilfoyle.

This article examines some of the issues that arose as a result of this admission and describes the difficulty of searching an area which had undergone significant change since David's body was buried there.

The authors would like to thank ex-Detective Superintendent Steve Brunskill, ex-Detective Chief Inspector Peter Broome and ex-Detective Sergeant Paul Murphy for their invaluable contribution to this article.

Contents

1. The Original Investigation
2. The Body Recovery
3. Lessons Learned

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1. The Original Investigation

On Friday 27th May 2005, friends of 37 year old David Guilfoyle reported him to the police as a missing person.

He had last been seen leaving the Grey Horse pub on Whalley Road, Accrington around 10.30pm the previous Wednesday. He had spent the evening with friends watching the European Cup Final between Liverpool and AC Milan and he was said to have left the pub in a jubilant mood. Friends became concerned the following day when they could not make contact with him and enquiries they made showed that he had not been in contact with other friends or family. He was a creature of habit, so this was very much out of character and led at least six people to call at his house over the two days. His green Jaguar XK8 convertible sports car was parked and secured on the driveway, but there was no sign of him. On Friday, 27th May 2005 some friends located a spare key that he kept hidden nearby and used it to enter and search the house. When they failed to find him inside they alerted the police.

Enquiries were made over the weekend without any success and by Sunday 29th May, the report had been upgraded to high risk and passed by Detective Inspector Paul Withers to the on-call SIO for assessment. This led to a crime scene examination at the house. Although there were no visible signs of blood, tests on a brown mark on the exterior of the car and on the paving were positive for blood. Further examination resulted in the discovery of extensive blood spattering on the climbing ivy on the front of the house, on the driveway and on the public footpath leading to it. The distribution of this blood was indicative of a violent assault taking place at the front of the house and it appeared that attempts had been made to clean it up. A number of items, including a torch that was discovered lying on top of a hosepipe, were retrieved for examination and a major enquiry was launched. A senior investigating officer was appointed to head the enquiry.

Enquiries showed that David Guilfoyle was known locally as a businessman. He was also a pool player who had represented England in the sport. He was well

known in the town and owned houses and other properties that he rented out. David lived alone and he was known to have had numerous relationships.

The interpretation of the scene and the known circumstances suggested that David arrived home after leaving the pub on the 25th and had been attacked after getting out of his car on this driveway and before entering his house via the front door.

In the first eight weeks of the investigation some 130 witnesses were interviewed and 469 statements were taken. A further 83 people were subsequently traced and interviewed. Crimestoppers offered a reward of up to £5,000 for information leading to the arrest and bringing to justice of the person responsible. A further reward was also offered for information leading to the discovery of David's body. His then 15-year-old daughter Sammy attended a news conference on 20th July 2005 to appeal for information.

Specially trained body recovery dogs were used throughout the enquiry and in February 2006, extensive areas of East Lancashire were searched in consultation with the NPIA Specialist Operational Support Unit.

Enquiries also focussed on David's relationships and one of these was with a woman named Debbie Fitzpatrick. There was evidence that her estranged husband, Shane, was jealous of the relationship and subsequent enquiries led to his arrest on the 7th June 2005. Following questioning there was insufficient material to connect him to any offence and he was released on police bail. However, DNA found on one of the batteries in the torch recovered from the scene was matched to him and this led to his re-arrest on 27th July. During some nineteen tape recorded interviews, Fitzpatrick made no comment to every question he was asked.

Although David's body had not been recovered, there was sufficient circumstantial and forensic evidence to charge Fitzpatrick with murder and following a three week trial at Preston Crown Court, he was found guilty and was sentenced to life with a minimum term of 20 years. The main evidence against

him was the DNA found on the battery of the torch recovered from the scene, which he was later to claim was his “only mistake”.

2. Body Recovery

In November 2012 the police were contacted by a Probation Officer who said that Shane Fitzpatrick now wanted to admit the murder and to tell the police where the body was buried. This was quickly followed by discussions with his solicitor, who confirmed it and started negotiations about how it could be achieved. By this time, the SIO and many of the team that had carried out the original investigation had retired. A new SIO was appointed and I was his deputy. Our first job was to bring ourselves up to date with the detail of the investigation and we did this by speaking to others who had been involved and also by reading the relevant documents.

Our next task was to develop an interview strategy. Fitzpatrick’s solicitor was a very experienced local defence solicitor who understood the issues and was highly professional throughout our dealings with him. He indicated that since being in prison Fitzpatrick had taken an interest in religion and that his main aim was in helping to recover the body for the sake of David Guilfoyle’s family. He was less interested in exploring any other outstanding issues surrounding the investigation.

We realised that the search for David’s body depended on what Fitzpatrick revealed to us in our first interview with him. As he had denied being involved in the offence during interview and at his trial, there were a number of outstanding issues that were of interest to us, not least of which was whether others had been involved. We decided that as he had already been convicted and as there was no direct evidence of others involvement, such questions should be a secondary issue to that of body recovery. As a consequence, our initial aim was simply to develop a rapport with Fitzpatrick so that he would not withdraw his cooperation before we had located the deposition site.

We applied to the Prison Governor to interview him through the normal procedures and this was granted. Fitzpatrick asked for his solicitor and the prison chaplain to be present. We agreed to this as we felt this would give him more confidence in achieving the common aim of recovering David's body. The interview team consisted of a Tier 5 Interview Advisor and myself. Together with the SIO, we had researched the previous investigation and were aware of the finer details, so it made perfect sense for me to be involved in the interview of Fitzpatrick.

The interview took place on Friday 2nd November and at his request it was not recorded on tape or contemporaneously, but he was happy for us to make notes. He was not cautioned. He opened the interview by saying:

"I want to admit I killed David. It was a moment of madness which I regret for the sake of his family, my family and my own position. I just went over the top. I then took the body and buried it in a shallow grave at Bolton-by-Bowland. He didn't deserve it but he does deserve a proper religious funeral."

He then described and used maps to show us where he had buried David's body. This was in a forest which he knew well because he used to go fell-running there. We were satisfied that the interview had gone as well as it could have done given the circumstances and that Fitzpatrick was motivated to continue cooperating with us to locate the body.

Our strategy now focussed on locating the deposition site and recovering the body. At this point we needed to involve David's family and establish early dialogue with the Coroner. In addition to the FLO, the SIO on the murder investigation had built up a good personal relationship with the family. He had since retired but still lived locally and we had contacted him during our research into the original offence. He was still committed to providing the family with the best support that was possible. The SIO kept the family informed of developments thus ensuring that they offered their continued support for whatever operational decisions were made.

The Coroner was similarly supportive. The Inquest had followed the usual path of being opened and then adjourned awaiting the outcome of the criminal trial; after this, a formal Coroners' verdict of homicide was recorded. The Coroner indicated that if a body was found, he would re-open the inquest for the purposes of formal identification and to enable the family to have the full circumstances heard in a court; this, of course, would not happen in a criminal court, because Fitzpatrick had already been convicted.

We then had to negotiate access to the area with the landowner. They were very supportive, but the land was a commercial forest which incorporated valuable shooting rights and a large shoot had been organised in the not too distant future. So whilst the landowner was happy for us to have access and do what was needed, we were very conscious of the fact that we were disrupting a business enterprise and needed to be as quick as we could be.

Confident that things looked pretty straightforward, on the day following the interview with Fitzpatrick, we started to search the area indicated. This area is known as Admiral's Wood. Anticipating the recovery of a body, we had already got a forensic archaeologist on the team and they, together with a CSI team, were on standby as we searched the area using the police helicopter, search teams and specially trained body recovery dogs. To assist the dogs and their handler to effectively search the area, rod-probes, poles and tape were systematically placed into the ground. This is in accordance with specialist search protocols.

It quickly became clear that things might not be as simple as we had hoped. It was autumn and the ground was wet, heavy and difficult underfoot. More worryingly, in the years since the body had been buried the area had changed significantly with trees being felled and replaced and some of the area had changed from woodland to grouse shooting. We had clearly underestimated the difficulty that this would pose in trying to follow the directions Fitzpatrick had given and the indications he had made on the map.

Furthermore, research of CATCHEM data by the POLSA search coordinator revealed that the weight of the victim and the topography of the area will have had an influence of on body disposal. The offender will have control of the decision relating to body disposal and the location will invariably be known to him. Body disposal is seldom random. Where no transportation is available, it is unlikely for a body to be carried for more than 50 metres from the site of the murder. If the victim is transported by the offender, 88% of bodies are deposited with 50 metres of the vehicle and the remainder within 150 metres. Offenders usually take the path of least resistance, using the least effort principle. If the body is moved from premises, deposition is predominantly a night time activity. This is largely related to the offender's window of opportunity to conduct such activity. This suggested that the deposition site would have been nearer the road than Fitzpatrick had indicated.

To try and pin down the deposition site with more precision, we obtained aerial photographs and on Sunday 4th November, we interviewed Fitzpatrick once again. This time he agreed to be interviewed under caution and we took contemporaneous notes. Using the photographs and the maps, he indicated the location of the deposition site and gave a description of where he had parked his car. He also explained how he had moved the body from the car to the grave. He described digging a shallow grave no more than six inches deep and placing the body in it, wrapped in a plastic sheet.

The following day, armed with the above information and Fitzpatrick's detailed description and the aerial photograph, we again searched Admiral's Wood. We still could not relate what he told us to the features on the ground and we concluded that we were not going to find the grave without assistance from Fitzpatrick at the scene.

Getting Fitzpatrick released from prison to help with the search raised a number of issues which had to be negotiated with the Prison Governor. Not least of these was the possibility of an escape attempt whilst in our custody. We managed to satisfy the Governor on all of these counts and Fitzpatrick was released into our custody for a day on the Tuesday 6th November.

At the scene, he was certain of his approach route because the lay-by where he had parked his car and the gate he had had to get over were still there. After that, things were less certain but he knew the area well and was sure that he had dragged the body across a field and then across a brook to what had at that time been a densely wooded area. He was also able to identify the bank he believed he had gone up before burying David's body. Fitzpatrick was becoming agitated at his inability to locate the body but said he was sure that we were in the right area. It seemed clear to me that he was genuinely trying to assist but that the changes in the landscape were making the task very tricky. When we thought Fitzpatrick had done all that he was able to, we returned him to prison and closed down the search for the night.

We felt sure that, assuming Fitzpatrick was being truthful, which I thought he was, we were in the right general area. We searched all of the following day without any success and the day after that, Thursday 8th November, the army assisted us with ground x-ray equipment. Again, we could not locate the grave.

By the 9th, we had exhausted all of the search techniques that were available to us and the way forward was not at all clear. We decided that as the grave was so shallow, our only option was to carefully remove the top layer of soil from the most likely parts of the search area. It was clear that people with spades could not remove sufficient areas of topsoil to make this a viable option and so the way forward appeared to be a mechanical mini-digger. This was more than we, and certainly the landowners, had originally anticipated, but they were extremely helpful and facilitated access to do it. A further problem was that what had started as a low key search of the area had now attracted a lot of attention. This meant that the local media were beginning to take an interest in what we were doing. We had developed a good working relationship with the local journalists and they were co-operative and indeed satisfied to receive minimal information, on the proviso that they would get 'their story' in the end.

Based on the previous searches and the areas indicated by Fitzpatrick during his visit, we identified a number of sites of potential interest and prioritised these for excavation by the mechanical digger. This proved successful and on the

afternoon of Friday 9th November, a piece of blue plastic sheeting was uncovered. Further examination confirmed the presence of David's body wrapped in a plastic sheet located in a shallow grave as described by Fitzpatrick. Under the supervision of the forensic archaeologist and forensic anthropologist the body was removed from the grave.

In order to better preserve any material that was contained within the covering sheet, it was decided that the remains would be unwrapped from it at the mortuary. As a result the sheet and the remains were placed in a body bag, and then a second body bag for removal from the scene. The forensic excavation of the grave site was then completed.

A post mortem examination was carried out on 13th November 2012, some seven and a half years after the fatal attack, and forensic odontology quickly confirmed that the remains were those of David Guilfoyle.

David's skull was extensively damaged and it was clear that he had suffered significant blunt force trauma. A forensic anthropologist and forensic pathologist painstakingly reconstructed it to confirm that he had been subjected to five or six blows to the head during the fatal attack.

Following the discovery of David's body and the post mortem examinations on it, Fitzpatrick was interviewed for a third time in prison. Again, this was in the presence of his solicitor and the chaplain and was under caution. Detailed notes were made of Fitzpatrick's account. He stated that he wished to explain how and why he had murdered David. During this interview he revealed more details of the murder itself. He described how he had become obsessed by David Guilfoyle's relationship with his ex-wife and had planned the attack meticulously, even to the extent of removing street lighting bulbs to help him remain concealed whilst he waited for David to return from the pub. He had researched his movements and knew where he was on the night of the murder. He then waited concealed outside his home and when he arrived back attacked him as he walked between his parked car and the front door of his house. He assaulted him with a wooden pickaxe handle by hitting him up to 15 times on the head. He

wrapped the body in a plastic sheet and secured it with gaffer tape before taking it in his car to Admiral's Wood which he knew well. He parked in the lay-by and then carried the body over the gate, dragged it across the field and over a stream to the banking. At the top of the banking, which at that time was within dense woodland, he dug a shallow grave with his hands and put the body into it.

Although he had planned the attack meticulously he forgot to remove his torch from the scene after the killing and it was this that provided the evidence that led to his conviction when his fingerprints were found on one of the batteries.

Sammy, David Guilfoyle's daughter, has finally got a resting place for her father in the knowledge that he will be at peace. Importantly, the uncertainty regarding the circumstances of her father's death was over and Sammy now has an appropriate place where she can mourn him.

3. Lessons learned

What I learned from this investigation was the following:

- The first investigation had been extremely thorough. They were not to know that someone else would be revisiting their investigation seven years later, but the quality of the work they did and the way it was recorded made it much easier for us to pick up the enquiry and carry on from where they left off.
- Family liaison was crucial. The original work of the FLO and the SIO had built a great foundation for us to work on. For example, following Fitzpatrick's conviction they had secured funding through the National Police Children's charity to facilitate David's daughter to attend Disneyworld. As mentioned above, when the original SIO became aware of the developments with Fitzpatrick, he came back from retirement just to support the family. The trust and confidence the family had in the original SIO stood us in good stead when things proved more difficult than we had expected. This enabled us to keep them fully informed of what we were doing and as a result we had David's family with us all the way.

- I thought the interview strategy was pitched at the right level and proportionate to the overall objective; that is, the recovery of David's body. We focussed on the main aim of recovering David's body rather than exploring every unanswered question from the first enquiry. This meant we had to make some compromises, such as agreeing to not cautioning him during the first interview or formally recording it. But this paid dividends in the end because we gained his trust and he eventually cleared up most of what we wanted to know. From the family point of view, they not only recovered the body of their loved one, but also got a full account of the murder and the motive for it. They were finally allowed to lay David's body to rest and this brought a sense of closure for the family.
- Working closely with the Coroner also helped him to make sure that the facts of the killing were heard in a judicial setting and feedback from the family is that this was important to them.
- In hindsight, I now think that we should have taken Fitzpatrick to the burial site before we started to search it fully. Once we knew that there had been some large scale changes, it would have been better to have had Fitzpatrick there earlier. Although he did not pinpoint the deposition site exactly when he did visit, the area was narrowed down considerably and this would have shortened the search and recovery process by two or three days.
- Use of the CATCHEM database is most certainly worthwhile, but it is important to remember that it is guidance only. Despite the usefulness of the information supplied by CATCHEM, David's body was in fact found a greater distance from the road than the guidance suggested. This was in keeping with what we knew about Fitzpatrick's level of fitness and his knowledge of the area.
- Although some would say that utilising the mechanical digger was a little unconventional, it proved to be pivotal in the recovery of David's body.
- The odontologist was vital in the formal identification process of David Guilfoyle. This satisfied the Coroner at the Inquest.

Homicide Research Group Update

Dr Michelle Wright, Manchester Metropolitan University

Ian Waterfield, Nottinghamshire Police

Abstract

The Homicide Research Group and Practitioners Research Network aims to identify, develop and deliver practically oriented UK research on homicide. This update details the findings of UK academic homicide research published in 2015 and topic areas identified in the Homicide Working Group's (HWG) 2015/16 strategic work plan as requiring further research.

Contents

1. Published UK Academic Homicide Research
2. Capturing Ongoing Research and Identified Areas for Future Research

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1. Published UK Academic Homicide Research

There are only a small number of academics and practitioners currently carrying out homicide-related research in the UK. In 2015, there have been five academic papers and one book published that detail findings which are likely to be of interest to SIO's, the abstracts and links to each of these publications, are provided below.

Exploring the Criminal Histories of Stranger Sexual Killers

Paul Greenall and Michelle Wright.

[Journal of Forensic Psychiatry and Psychology](#)

Although sexual homicide is receiving increasing research attention, few studies have examined the criminal histories of sexual killers in any detail. This study examined the criminal histories of 81 British stranger sexual killers to determine whether they were generalist, specialists or both and whether their criminal histories reflected violent, sexual, marginality and over control pathways. Results found most stranger sexual killers were generalist offenders and sexual homicide was part of a varied criminal repertoire and non-sexual crimes predominate. This 'antisocial orientation' means future offending may not be limited to sexual violence. Criminal histories reflected the violent, sexual, marginality and over control pathways, but offenders in the violent pathway were more criminally orientated. The clinical and investigative implications of these findings are considered as they suggest knowledge of the criminal histories of stranger sexual killers is an important consideration for criminal justice professionals.

The Use of Crime Scene and Demographic Information in the Identification of Sexual Homicides

Adam Carter, Clive Hollin, Ewa Stefanska and Tamsin Higgs.

[National Offender Management Service](#)

It is often the case that those convicted of sexual offences find it difficult to discuss their offending and those who have committed a sexual homicide can be

particularly reluctant to talk about their criminal behaviour. As a result, forensic practitioners frequently rely upon crime scene information to identify any sexual behaviour associated with a homicide. This study aimed to look for discernible patterns and victim and perpetrator characteristics that may serve to delineate sexual homicide without relying on disclosure from the perpetrators of the crime. A second aim of the study was to test the hypothesis that the majority of sexual homicide cases can be captured using Ressler, Burgess, and Douglas's (1988) definition of sexual homicide. A sample of 65 sexual killers and 64 cases of men convicted between 1966 and 2005, of what were considered on the basis of available evidence to be non-serial, non-sexual homicides were used.

Toward Identification of the Sexual Killer: A Comparison of Sexual Killers Engaging in Post-Mortem Sexual Interference and Non-Homicide Sexual Aggressors

Tamsin Higgs, Adam Carter, Ewa Stefanska and Emily Glorney.

[Sexual Abuse: A Journal of Research and Treatment](#)

Establishing a model of sexual assault reflecting psychosocial and behavioural characteristics of perpetrators of sexual killing and rape is necessary for development in risk assessment and intervention. Methodological variations in defining sexual killing have amalgamated serial and non-serial offenders and perpetrators with direct and indirect associations between killing and sexual arousal. This study defined sexual killing specifying that killing should be directly linked with sexual arousal, and sampled 48 sexual killers, operationalized to include only those engaging in post mortem sexual interference, with one or two known female victims (non-serial), from prison service national (England and Wales) databases. These sexual killers were compared with 48 non-homicide, life or indeterminately sentenced sexual aggressors on psychological and crime scene characteristics. Contrary to previous research, fatal outcomes were associated with neither stranger victims nor weapon presence; sexual killing was characterized by severity of violence less so than non-fatal assault. Sexual killers more often reported problems with emotional loneliness, empathic concern and sexual entitlement than the sexual aggressors. Theoretical and applied implications are discussed.

Gender Comparison of Young People Charged With Murder in England and Wales

Jean Gerard, Kevin Browne and Kate Whitfield.

[International Journal of Offender Therapy and Comparative Criminology](#)

This study investigated gender differences regarding young people charged with murder in England and Wales. A sample of 318 cases was collected from the Home Office's Homicide Index and analysed. Of these cases, 93% of the offenders were male and 7% female. The analyses explored gender differences in terms of the offender's race, offender's age, victim's age, victim's gender, weapon used, offender-victim relationship, and circumstances of the offence. The study found that a female offender was significantly more likely to murder a family member than a male offender, and a male offender was significantly more likely to murder a stranger than a female offender. In addition, a female offender was significantly more likely to murder a victim below the age of 5 than a male offender. Implications for interventions with young people who are charged with murder are discussed.

Child Homicide: Generating Victim and Suspect Risk Profiles

Jason Roach and Robin Bryant.

[Journal of Criminal Psychology](#)

In England and Wales, on average one child every week is a victim of homicide. The purpose of this paper is to explore whether different victim-risk profiles and suspect variables can be differentiated for specific victim ages. This paper presents a preliminary analysis of more than 1,000 child homicides committed in England and Wales between 1996 and 2013, from data provided through the Homicide Index. Statistical techniques such as cluster analysis were used to identify specific victim-risk profiles and to analyse suspect variables according to the age of victim.

The findings present a clearer picture of the risk-age relationship in child homicide, whereby several specific risk profiles are identified for specific child ages, comprised of crime variables including; likely victim and suspect

demographics, the most likely circumstances of the homicide and methods of killing. Using similar techniques, a number of tentative clusters of suspects implicated in child homicide are also described and analysed, with suggestions for further analysis that might prove of value.

The practical implications should not be understated. For those professionals working in the fields of child protection and criminal investigation the identification of risk profiles promises to provide a back-cloth with which to practice when confronted with complex and distressing child homicide scenarios. This research promises most to those currently training in related professions.

Although the statistical level of risk has been linked with the age of a child (with younger children being most vulnerable to killing by a parent or step-parent and older children most vulnerable to killing by acquaintances and strangers), extant research is yet to progress beyond the identification of broad age-risk categories. The paper concludes with a discussion of the likely implications for those charged with reducing and investigating child homicide and outlines the possibility of future research.

When Men Murder Women

R Emerson Dobash and Russell Dobash

[Oxford University Press](#)

This book draws upon the findings of the "Murder in Britain Study". This was a 3-year Economic and Social Research Council (ESRC) funded study carried out by the authors in which they analysed 866 homicide case files and carried out in-depth interviews in prison with 200 homicide offenders (180 males and 20 females). The book comprises of three parts: 1) Intimate Partner Murder 2) Sexual Murder 3) Murder of Older Women. Each part details the murder event, relationships, contexts and circumstances of the specific type of murder and the perpetrators' life course, orientations and cognitions. The book is an essential read for all who are interested in the nature and dynamics of interpersonal violence.

2. Capturing Ongoing Research and Identified Areas for Future Research

Details of current ongoing policing and crime reduction research can be found on the College of Policing's [Research Map](#).

Within their 2015/16 annual work plan the Homicide Working Group (HWG) have identified the following areas as requiring further research:

- The investigation of child death, an area of increasing risk for infants under 1.
- The professional development of the workforce - what skills does it require to investigate homicide?
- New ways of working - what new technical approaches are available, particularly in the cyber, forensic and telecommunications fields?

If you are currently carrying out homicide-related research, or plan to in the near future please let us know so that your research can be included within the work of the Homicide Research Group.

Operation Sanderling

Harry Harrison, Detective Inspector, West Midlands Police

Mike Ross, Detective Sergeant, West Midlands Police

Simon Lees, Detective Constable, West Midlands Police

Abstract

Operation Sanderling started when an incomplete human torso was discovered during routine maintenance work on a Birmingham canal. The canal network in and around Birmingham is extensive and is well used for both commercial and leisure purposes. This posed potentially significant difficulties in locating the point where the body had been put into the water and in carrying out searches for further body parts and other evidence. Local knowledge was harnessed to overcome these issues and this led to the recovery of further body parts and the identification of the victim and the two suspects. Much work remained to be done even then, but an investigative strategy that tried to keep things simple enabled us to build a case against them which led to their conviction for murder. This paper examines how the investigative strategy developed and the lessons that were learned during Operation Sanderling.

Contents

1. Introduction
2. Narrowing search parameters
3. Identifying the suspects
4. Prosecution
5. Lessons learned
6. Conclusion

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1. Introduction

On 12th May 2014 British Waterways staff were carrying out maintenance work on one of the many canals that run through Birmingham when they discovered a large black suitcase trapped in a reed bed. They lifted the case out to the bank and saw what they thought might be the body of a dead dog inside it, but they were sufficiently concerned to report the find to the police. The officers who responded to the report saw that case contained what appeared to be a human torso and a major incident response was initiated. I attended the scene and, without opening the case any further, I could see that it contained human remains, although the size of the case suggested that it was not a full body.

Initial enquiries showed that the case had been seen in the canal in various locations over the past few days and suggested that it had been floating downstream until it came to rest in the reed bed.

The apparent dismemberment of the body, the method of disposal and the fact that we did not at that time know how long it had been in the canal suggested that this could be a complex case and I was keen to get as much help as possible early on. I spoke to a forensic pathologist from the scene to see what type of expertise, such as an entomologist, we might require. He thought that deterioration of the body would be rapid now that it was out of the water and suggested that the priority was to refrigerate the suitcase with the body inside as quickly as possible to preserve it. The post mortem would then help us to determine what other areas of expertise would be required. We knew that we were not dealing with either the murder scene or the deposition site and that the case had already been moved by the British Waterways workers, so we photographed the case in situ and moved it to a mortuary as quickly as we could. A crime scene examination of the recovery site was then undertaken to make sure there was nothing else of value to us there.

The following day the case was scanned with the body still inside to provide a better understanding of what was in it. The contents were then removed and a forensic post mortem examination was carried out by Nick Hunt. This showed

that the case contained the torso of a man whose head and both arms had been removed. One complete leg remained attached to the torso and the other had been cut off above the knee. The case, which had two small wheels and a handle for pulling it, had been weighted down with broken paving slabs that had red paint on them. The reason it had floated to the surface and then along the canal was that the gases generated by decomposition had been trapped in the torso and given it enough buoyancy to overcome the weight of the paving slabs.

The dissection of the body had been extremely rough and areas where whoever had done it had tried to make cuts but failed were visible. There was a tattoo of what we interpreted to be a mushroom on the body and this was entered onto the PNC Quest search in an effort to achieve a quick identification of the body. No cause of death could be established at the PM, which ended up taking nine hours to complete. The pathologist thought that the person could have been dead for at least three or four weeks and the problem of the body deteriorating rapidly that he had anticipated was clearly visible during the PM.

The Quest search for the mushroom tattoo was negative but we had DNA from the PM so that was sent off for analysis and we commenced all of the usual enquiries to see if the remains matched anyone who had been reported missing. An entomologist was also asked to help pin down the time of death with more precision.

I remained SIO for the case, which was being investigated by the West Midlands Police Major Investigation and Review Team (later to be renamed the Homicide Team). At this early stage we knew very little other than that someone had gone to some trouble to dispose of the body, but that could have been at any time during the last month and this meant that the time parameters for any enquiries would be unusually wide. The location where it had entered the canal also presented a problem. The canal system in Birmingham is extensive, with over a hundred miles of canals in addition to the streams, gullies and culverts that drain into it. Preliminary enquiries suggested that the body could have entered the system anywhere within a 20 square mile area upstream of the reed bed where it was found. Most of this potential area was heavily populated and built

up and searching it, together with gathering CCTV would require search parameters that would be very difficult to resource.

This led me to anticipate a lengthy and complex investigation and so I felt it was essential to have a good core team of investigators who I could be confident would remain with the enquiry as other staff were inevitable rotated to other jobs. My managers agreed, and I was lucky to be able to put together a small core team who did remain with the case for what eventually turned out to be over a year. The success that we had was due to their professionalism and the depth of knowledge they were able to build up about the case and the immense amount of material that we ended up gathering; most of which was not relevant but all of which had to be managed for evidential and disclosure purposes.

Despite the challenges, we did have one early piece of luck that helped to shape the course of the investigation.

2. Narrowing the search parameters.

Clearly, searching the canal for other body parts and for the point where the suitcase was put into the water were important considerations. We made use of our search resources in the immediate area where the suitcase was discovered but moving upstream presented enormous challenges because of the potential size and nature of the area. We also discussed draining the section of the canal near the reed bed in order to search it more thoroughly. The management and staff at British Waterways were extremely helpful but in addition to explaining the technical difficulties of draining the canal, they also estimated that it would cost one million pounds a day to do it, which clearly ruled it out. However, during these discussions we were introduced to several voluntary organisations who used the canal system and who had detailed knowledge that was of use to us. In particular, we met one person who knew the canal system extremely well and who had been used on previous police enquiries. He believed that, given the previous sightings and the final resting place of the suitcase, that the most probable place where it had entered the water was a place called Pope Bridge, which is a couple of miles up-stream from where the suitcase was found.

This person's knowledge of the canal system was so extensive that I invited him to attend a team briefing to explain how the canals worked so that all of the team understood it better. Of course, there was no way of knowing if he was right about Pope Bridge, but it made sense to work up-stream from the reed bed and nothing was lost by working towards Pope Bridge rather than any of the other possible upstream destinations and so search parameters were set to accomplish this.

In the first instance, the search was to be carried out using search teams and cadaver dogs. I also asked the teams to identify any CCTV that might be relevant but I realised this could be difficult until we had a more precise location to work from.

There is no substitute for good staff, good briefings and good luck. The search teams had all been briefed on the details of the investigation including the case in which the body was found. At Pope Bridge, they noticed some marks in the cobble paving leading from a car parking area towards the canal side. These marks could have been made by the wheels of a suitcase of the type in which the body had been found and they reported this to the MIR. The marks were photographed and cadaver dogs together with our Operational Support Unit (OSU) shallow water search trained officers were deployed in the area round where the marks stopped by the water side. The cadaver dogs made no indications but the shallow water search team recovered some decorator's tools, a hammer and a large knife wrapped in a plastic bag. A short time later, they recovered a red suitcase from the canal and this was found to contain body parts including a head, two arms and part of a leg, which were all wrapped in plastic.

As a result of these finds, I commissioned a more comprehensive search than the shallow water search team could carry out and this was done by Nottinghamshire Police Underwater Search Unit. They recovered a handsaw with red paint on it from the same area.

Tapping into local knowledge and trusting those who worked the canal and understood its operation had enabled us to focus our search area and had paid

dividends in terms of progressing the enquiry and reducing the time taken to carry out searches.

The suitcase was scanned prior to the PM which enabled a forensic anthropologist to show that the body parts matched those found earlier but that there was a small piece of shoulder, including the shoulder ball, missing. The PM confirmed that the dissection of the body had been roughly done but did not contribute to establishing a cause of death or the time when it might have occurred. Paving slabs with red paint on had also been used to weigh down this suitcase.

The 15th May was also significant in that the DNA taken at the first PM made a hit on a 39yr old local man named Michael Spalding. The hit was not to an evidential standard, but significantly, his records showed that he had a 'Toadstool' tattoo. When 'Toadstool' was put into Quest instead of 'Mushroom' it provided a hit, something that no one had thought to do at the time of the original PM.

The identification of the remains, which was still provisional but seemed very positive, together with the discovery at Pope Bridge, gave a new focus to the investigation.

3. Identifying the Suspects

A passive data trawl found an open Facebook page for Michael Spalding with messages on it from his girlfriend Kirsty Fryer asking where he was and stating that she was worried about him. These were dated to times after which it was known that his body must have been deposited in the water.

This information enabled us to contact Kirsty Fryer and interview her. She said that she had been in a relationship with Michael Spalding for some time. They did not have a lot of money, Michael made some money through casual work as a painter and decorator and they had been living with friends until March of that year. They then moved into a terraced house at 113 Oxford Road, Smethwick,

which was the home of Lorenzo Simon and Michelle Bird. Lorenzo Simon had offered to let them live there rent free and to use his influence to get them the tenancy of a similar property without having to find a deposit if Michael decorated the house for him.

She told the officers that there had been a great deal of tension in the house and that Michael was bullied by Lorenzo Simon. On Friday 25th of April, she was told by Bird that Michael had left the house and that she had to go too. She caught the train to her grandmother's house and never saw Michael again.

113 Oxford St is 420 yards from Pope Bridge and the walls at the front and rear of the house were newly painted a shade of red that appeared to be similar to that found on the paving slabs used to weigh down the suitcases, on the decorating tools recovered from the canal and on a handsaw that a subsequent search of the same area of canal had located.

I suspected that Lorenzo Simon and Michelle Bird were involved in the murder and disposal of the body. Having considered a number of options, including surveillance on the house, I decided that it was most probably the scene of the murder and dismemberment and it was therefore important to secure it for examination as soon as possible. As a result, the whole team together with our Crime Scene Coordinator Helen Evans spent two days in meticulously planning our entry and the examination of the house. We decided to video record the arrest of the two suspects and to remove them from the scene as quickly as possible to allow Helen to get to work.

We entered the house on the 19th of May and the two suspects were inside. They made no admissions during arrest and were taken away for interview. The hand held CCTV cameras, continued filming until they arrived at the custody office. In the back of the police car after caution Lorenzo Simon said words to the effect that Michael Spalding was his friend and that he had thrown him out of the house. This provided a great bit of evidence which was later played in court to great effect by our barrister.

The scene examination was painstaking and took three weeks using an array of tests for blood or other evidence of an attack or dismemberment of a body. Some of the carpets were new and there was a large amount of cleaning products in the house but the only forensic result we achieved was the location of some minute spots of blood on a wall. These were eventually attributed to Michael Spalding but they were so small and in such a position that they were of no use in determining whether they originated from an attack, dismemberment or at an earlier time when Michael injured himself whilst working.

A search of the rear yard revealed yet more walls painted red, paving stones of the type used to weigh down the cases together with a 40 gallon oil drum that had been used as an incinerator. Enquiries with the neighbours led to evidence of some of them hearing and seeing Michael being bullied and intimidated by Lorenzo Simon and accounts of the oil drum being used to burn things about the time that Kirsty had been forced to move out. The fire was described as causing an awful smell which was so bad that one of the neighbours reported it to the fire brigade. As the fire was not out of control they provided advice but did not attend. It was thought that the bin might have been used to dispose of material cleaned from the house, such as carpets and it was taken away whole, with its contents, for examination.

Meanwhile, the interviews of Lorenzo Simon and Michelle Bird had taken place. They gave accounts of allowing Michael and Kirsty to stay in the house in order to decorate it but of problems of domestic violence between them which led to Simon throwing them out. They denied any knowledge of harm coming to Michael or of the body parts.

Whilst they were in custody, the oil drum found in the back yard was examined in a way that was similar to an archaeological dig, with well-defined layers of debris indicating specific periods of burning. Eight layers were identified and one layer had some unburnt documents in it that related to Kirsty Fryer. In the layer immediately under this was what appeared to be a lump of charcoal but which our forensic anthropologist Julie Roberts quickly identified as the missing ball joint from the shoulder of the torso found in the first suitcase.

This taken together with the evidence from Kirsty, the neighbours and circumstantial evidence of the broken paving stones and the red paint was sufficient for the CPS to agree a charge and they were both charged with murder on 23rd May.

A forensic anthropologist confirmed that the ball joint was likely to be the missing body part. But this still left us with a potential problem. Whilst there was good circumstantial evidence that we were dealing with the body of Michael Spalding, and that the parts found in the two suitcases were from the same body, there was no definitive evidence that it was Michael or that the shoulder joint was from the same body as the other two finds. The DNA evidence we had was not to an evidential standard and we had not been able to find a sample of DNA that we could attribute to Michael to confirm this. Even if we could, the shoulder joint recovered from the drum was so badly burned that it was thought that we would not be able to get any DNA from it. The paving slabs and the red paint had the potential to provide continuity between Oxford St and the two suitcases of body parts, but physically matching the broken slabs was potentially a long job that was not certain to succeed and I was advised that making a definitive match to the paint might also be difficult. Both of these processes were set in motion but I felt that if we could definitively match the shoulder joint to the remains found in the first suitcase we would have a connection to 113 Oxford St which, whilst still circumstantial, would be watertight in court.

In researching how this might be done I was directed to Professor Mark Williams at Warwick University. His day job is heading up the Product Evaluation Technologies Group, which researches quality control technologies for the engineering industry. As part of this work, he had developed a scanner that is far more powerful than those found in hospitals and which, I was told, could be used to measure how well one thing fitted another, for example, a shoulder ball joint and a socket. In essence, the equipment takes a very high quality digital image of both objects and allows them to be reconstructed and manipulated in various ways, such as high resolution three dimensional images, or 3D printing in resin. Professor Williams was amazingly helpful and took images of the shoulder socket and the ball and was able to show not only that they were a

physical match but also that there were minute traces of saw marks that matched on both of them. He prepared these images for presentation at court and even printed out a model of the joints in resin to help the jury understand that they came from the same body. I felt that this provided us with an excellent level of continuity between the shoulder joint found at 113 Oxford St and the body parts in the two suitcases.

We did later get a DNA match between the ball socket and the body parts but the evidence of Professor Williams comprehensively proved the match in any event.

Following charge, some excellent work by our analyst on the mobile phone account of Michael together with witness evidence from those rung by the phone showed that on the morning of the 26th April the phone usage changed. We believed that this was because having murdered him, Michelle Bird started to use the phone to build an alibi that he had left the house of his own accord following a failed attempt to rape her. Once we had this date, we were able to focus in on other enquiries, particularly the many hours of CCTV coverage that we had seized.

One of the problems that arose with having no scene and no time parameters earlier in the enquiry was that we had seized a lot of CCTV material on the grounds that it was better to have it early in the hope of narrowing down the parameters as we learned more. Once we had achieved that focus, we were able to concentrate on CCTV in the area around Oxford St on the 25th and 26th April. Although there was no direct footage of the house, there was sufficient coverage to see who was going towards it and away from it. This suggested that Michael did not leave the house in the time period given by Simon and Bird but did show them walking away from the house pulling two suitcases similar to the ones which contained the body parts.

We also obtained evidence of the use of Michael's benefits card to withdraw money after the 26th April and within a few minutes of Bird using her own card at the same machine. Although there was no CCTV to confirm this, we

interpreted it as her using his card to fraudulently withdraw the money after his death.

Another interesting piece of evidence came from the examination of Bird's phone which showed her researching trauma cleaning on the internet. She also carried out Google searches for countries with no extradition treaties with the UK.

One way and another, we felt that from an unpromising start, we were building a solid case against the two defendants.

4. Prosecution

As all SIOs know, once a suspect is charged the whole case looks straightforward and everyone, except those involved, assumes that case preparation will be straightforward. I knew that the amount of material we had gathered in this case was well in excess of what we would normally have. This was because of the initial uncertainties around time and location, the lifestyles of those involved and the way Simon and Bird had tried to build alibis following the murder. For example, the FLO logs relating to Michaels family were 700 pages and as some of these were expected to be witnesses because they had been contacted by Bird after the murder, they were important from a disclosure point of view. We also had our fair share of the usual dead end lines of enquiry, such as, seizing and examining another house which Simon had access to and which was thought at one time to be a potential scene. In my mind, this volume of material required an early case conference with the prosecuting barrister to develop a clear prosecution and disclosure strategy. For various reasons, a barrister was not appointed until quite late and so we managed disclosure as best we could but the volume did cause problems and the trial was delayed. An additional problem was that Kirsty, who had been due to give evidence, became unavailable and this added to the disclosure and case management difficulties.

During this period we received defence statements in which Simon admitted hitting Michael a single blow in self-defence which killed him and Bird said that whilst she was out of the house at this time, she did assist with the disposal of

the body because she was scared of Simon. These defences were not accepted and both were tried and convicted of the murder.

5. Lessons learned

Using local knowledge.

Our lack of understanding about the way the canal system worked and the probable entry points of the first suitcase to be found had the potential to cause us some serious difficulties because of the size of the area covered. Tapping in to the local knowledge of the canal staff and the voluntary organisations who are associated with the inland waterways helped us to narrow down the problem and in the event, provided us with the exact spot where the case was put into the water. There is no doubt that this saved us enormous amounts of time and effort and enabled us to exploit investigative opportunities that may not have been available later. For example, the oil drum containing the ball joint might have been emptied before we discovered it.

A Core Team

The scale of the material gathered during this investigation was such that it could not have been managed had we not established a core team at the outset. It was a difficult enough task as it was, but if, as often happens, we had been rotating staff to other enquiries as they needed them we would undoubtedly have got into a mess. The core team came to know the material well and were able to identify significant links as new information became available and to quickly identify where to go for information as the need arose. Although it may appear expensive in this day and age, a core team saved money in the long run in this case.

Investigative strategy

I am a great believer in trying to keep enquiries as simple as possible. There is always a temptation to use sophisticated investigative techniques and in this case we did consider surveillance and other covert tactics in relation to Simon and Bird. I resisted these on the grounds that if the house was a scene it was better to get into it as soon as possible before evidence was lost. As it was, the scene had been well cleaned but we recovered the shoulder ball joint which proved to be the conclusive piece of evidence in this case.

Similarly with the forensic strategy, although the equipment used was highly sophisticated, what we were after was a straightforward physical match between the ball joint and other body parts on the grounds that a jury would find this compelling even if we didn't have DNA.

Video arrest

Although this did not result in any major evidence it was useful in recording the suspect's early remarks about the victim and the circumstances and reduced their room for evasion when we came to interview. The video of Lorenzo Simon's comments in the police car on the way to the station also illustrated to the court the extent to which they lied about the incident.

CPS liaison

On a personal level, relationships with the CPS were good, but we seemed to struggle to get the early involvement of a barrister which I think would have saved us a lot of time and reduced the court delays that we eventually experienced.

The learning point for me is that because of my familiarity with the CPS personnel I was too relaxed about the appointment of a barrister. I knew the case was going to be complex and should have insisted on having a QC from the start. The appointment of lead council three weeks prior to the trial generated

huge disclosure issues and revealed flaws in the pre-trial disclosure process. The defence took great issue with this and it was the subject of comment by the trial judge, although there was no criticism of the police.

6. Conclusion

From the outset this case had the potential to be long and complex. Even when we had identified the suspects, it was by no means certain that we could build a case that linked them to the murder and the disposal of the body parts. But, by using local knowledge, building a core team and developing an investigative strategy that kept things simple, we were able to overcome all of the problems that we were presented with. It wasn't always easy and the team had to work hard to manage some of the uncertainties that were inherent in the case and the volume of material that we gathered. But, in the end, we were able to build a compelling case against Simon and Bird which led to their conviction for the murder of Michael Spalding.

The Evolution of Homicide Investigation in the UK

Peter Stelfox, Editor of the Journal of Homicide and Major Incident Investigation.

Abstract

Government cuts to police funding have already bitten deep into the service but the Home Secretary had indicated that more are on the way. This had led to a radical examination of all areas of policing to see what can be done more cheaply. Because homicide investigation is a high cost area and the number of offences has fallen over the past few years, it would seem to be a prime target for savings. But identifying what could change, where and by how much is not easy. There is a lack of fundamental research into what works and what doesn't at the operational level and the corporate memory is limited because police careers are relatively short. This leads to a situation where important decisions could be made on limited evidence and with little understanding of the potential consequences. This paper examines what is known about the development of homicide investigation in the UK with the aim of providing some support to decision makers in this field.

Contents

1. Introduction
 2. Defining the System of Homicide Investigation in the UK
 3. Professionalising the Role of the SIO
 4. Summary
 5. Conclusion
- Bibliography

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1. Introduction

As financial pressures increase on forces, it is inevitable that homicide investigation, like all other areas of policing, comes under scrutiny to see where costs can be reduced. Some hard decisions have already been made and savings have been achieved. Recently, the Home Secretary has given notice that additional budget cuts are on the way and this has led to a more fundamental questioning of why homicide is investigated in the way it is and where further cost savings might be made.

The absence of in depth research in this area (Neyroud and Disley, 2007: 549) makes answering such questions difficult. Furthermore, because police careers are relatively short, the service's corporate memory is limited. As a consequence, the service approaches these hard decisions with a very limited evidence base.

This paper examines what is known about the development of homicide investigation in the UK with the aim of providing some support to decision makers in this field.

It argues that the system of homicide investigation cannot be fully understood simply by describing its component elements such as the human resources, HOLMES, MIRs or the techniques used. Almost all of these are used in the investigation of other crime types and a narrow focus risks missing what is unique about homicide investigation.

Instead, the focus is on public concern about homicide which translates into a demand on the police to investigate it in a way that maximises the chances of success in every single case. This differs significantly from the public's attitude to the investigation of other crime types, where they generally accept relatively low detection rates. As a result, the police can optimise their use of resources when investigating other crime types provided they achieve an acceptable overall number of detections. In practice, this means that the majority of crimes

remain undetected. This outcome would never be acceptable to the public if applied to homicide investigation.

The need to maximise success in each case has shaped the way homicide is investigated in the UK today, but this development has not been straightforward. The service's traditional resistance to the specialisation of investigative roles meant that, until relatively recently, competence in investigative practice, management processes and governance structure were not formally developed at a national level. Expertise did exist, but it varied from force to force and Chief Officers found their own ways of assuring it or of managing the situation when things went wrong. And they did go wrong. During the period from the 1970s to the end of the last century there was a series of high profile failures in the investigation of homicide which were hugely damaging to the public's confidence in the service. They resulted in a raft of legislative and procedural changes which, together with developments in many of the sub-processes of investigation, the widening of forensic services, and the professionalisation of investigative roles, transformed criminal investigation.

The system of homicide investigation that emerged from this period can be described as one where the service maintains a cadre of specially trained SIOs who can draw on a wide range of resources and forensic expertise. The role of the SIO is to use these resources to maximise the chance of detecting a particular homicide as effectively as possible.

The paper concludes that whilst cost savings must be made, they cannot include going back to a situation where unqualified people muddled through as best they could under managers who had little information about what they were doing or why. In the diverse and connected communities we now police, such an approach would not only fail to deliver the level of service that the public expect in homicide investigation but would be quickly and loudly exposed.

2. Defining the system of homicide investigation in the UK

When describing the system of homicide investigation in the UK it is tempting to focus on its component parts, such as the knowledge and skills needed for the many roles that people play, or the IT such as HOLMES, the procedures like MIRSAP or the services of forensic providers and such like. The problem with this approach is that few, if any, of these are unique to homicide investigation. Even where they were first instigated to contribute to homicide investigation, as was the case with HOLMES, they were quickly adopted in other areas and their development was managed by ACPO (as it then was) working groups that were independent of the Homicide Working Group. So a narrative based on the components of homicide investigation would inevitably be fragmented and risks missing the key difference between homicide investigation and the investigation of most other types of crime.

This difference lies in the unique demands that the public, politicians and other criminal justice partners create for the police in relation to homicide investigation. Although there are very low volumes of homicide in the UK, those that do occur often lead to high levels of fear in the local area and can act as 'signal crimes' (see Innes 2014 for a fuller explanation of signal crimes and Lowe, Innes and Roberts, 2003: 67 for the impact of homicide on community reassurance). Even though this fear may be disproportionate to the real risk, it nonetheless translates into heightened demands for effective police action.

This public concern also impacts on other criminal justice agencies and is reflected in the way that they deal with homicide, for example, it is always tried in Crown Courts by more senior judges and receives a level of defence funding which brings with it a far greater scrutiny of the evidence than for many other types of crime (Criminal Legal Aid Manual, 2015:136).

The level of public concern, together with the high profile homicides have within the criminal justice system, is reflected in the amount of media attention they generate. This can be intense and can throw a harsh light on the adequacy or otherwise of investigative practices. It has been argued that it is the level of media attention that fuels public concerns about homicide and not the other way

round (Leishman and Mason, 2003: 10) but in either case, the demand on the police is the same.

As a consequence, although the volume of homicide is low, the demand for success is extremely high and this has led to a system of investigation that seeks to *maximise* the chance of detecting each and every case. This contrasts with the approach to the investigation of most other crimes where the aim is to *optimise* the use of resources over all cases to achieve an acceptable detection rate. This additional demand in relation to homicide is not confined simply to the detection of the offence. There is also a demand for high levels of family support and community reassurance together with an expectation that forces will maintain their efforts over long periods and even in other jurisdictions. For example, a recent BBC report led to the reopening of the unsolved 1965 murder of Elsie Frost (www.bbc.co.uk/news/magazine-34314171) and in 2011 the Prime Minister promised that the Metropolitan Police would re-investigate the Madeleine McCann case in Portugal. Despite protests from members of the Metropolitan Police Authority to the effect that the force had other priorities, officers were deployed to it (Daily Mail 14/05/2011).

This level of pressure to do something, which extends to cases where detection may seem unlikely, appears to be unique to homicide. Even in the field of counter terrorism work, which often involves the prevention of homicide, there is an acceptance that resources have to be prioritised according to risk and that not everything can be done in every case (Prevent Strategy 2011, Paragraph 3.9).

The difference between *maximising* outcomes and *optimising* resource deployment has profound implications for the way that homicide is investigated. This is because the scale and complexity of the approach and the fact that there is a high cost to getting it wrong, creates a far more difficult investigative problem than would otherwise be the case.

The difference that the maximising approach makes can be summarised as follows:

- It requires more staff,
- Staff tend to be more specialist,
- A wider range of investigative techniques are used,
- A great deal more material is gathered and has to be managed,
- Cases are kept open for longer (and in theory never closed),
- Failure in an individual case is subject to a far greater level of scrutiny than for other crimes.

The scale of the management and investigative task created by the above means that SIOs have to be of management rank as well as being experienced investigators who understand how to use the many techniques at their disposal.

The ACPO Murder Investigation Manual defines the role of the SIO as:

An SIO is the lead investigator in cases of homicide, stranger rape, kidnap or other complex investigations.

This requires the SIO to:

- *Perform the role of officer in charge of an investigation as described in the Code of Practice under Part II of the Criminal Procedure and Investigations Act 1996;*
- *Develop and implement the investigative strategy;*
- *Develop the information management and decision-making systems for the investigation;*
- *Manage the resources allocated to the investigation;*
- *Be accountable to chief officers for the conduct of the investigation.*

(ACPO, 2006: 25)

Research for the Home Office highlighted the range of skills needed by SIOs and their central role to the success of the investigation (Smith and Flanagan, 2000) and Michelle Wright (2013) has demonstrated the way in which their experience influences decision making.

Other resources are important, as are the systems and processes that support homicide investigation. Skill levels cannot be turned on and off like a tap, so all of the staff deployed to homicide investigations need to be as highly skilled as possible at the time they are used; capacities such as first response, searching, house to house and forensics cannot be developed overnight and so have to be available when needed; and systems such as HOLMES cannot be bought off the shelf on the day an MIR is established so have to be in place already. All of these are used by forces across a wide range of crime types and so it is in their interests that they should be established and maintained to the highest level possible. But their effective deployment in homicide investigation depends on the skills, knowledge and experience of SIOs.

The system of homicide investigation in the UK can therefore be described as one where the service maintains a cadre of specially trained SIOs who can draw on a wide range of resources and expertise. The role of the SIO is to use these resources to maximise the chance of detecting a particular homicide as soon as possible.

One of the features of the current system is that it can be deployed very flexibly to meet the unique circumstances of each case. Individual homicides present themselves to the police in different ways and the investigative challenges and opportunities that they involve vary enormously. The system allows for these differences by enabling Chief Officers to deploy resources appropriate to the circumstances of each case whilst remaining within the overall framework and applying common standards to all cases.

The flexibility of the system also caters for differences between forces. Not every force experiences the same volume of demand and demand fluctuates from year to year. Forces also differ in the ways they configure their staff as well as in areas such as their IT and their command structure. These differences can all be accommodated within the overall system of homicide investigation. For example, not all forces have the same version of HOLMES or integrate it into their other IT in the same way, but the fact that they all use a form of HOLMES means that there is a basic national level of functionality that they all share.

Since the introduction of PIP3 in 2005, the flexibility and interoperability of the system has been improved by the adoption of common national standards for the selection, training and development of SIOs. As will be seen in the next section, the introduction of PIP put the system of homicide investigation in the UK onto a far more professional footing than it had been and enabled Chief Officers to provide the level of service expected by the public.

3. Professionalising the Role of the SIO

The demand for high quality homicide investigations has been present from the earliest days of policing. Indeed, it was public concern over the police failures in relation to two murders in London in 1840 and 1842 that led to the formation of the first Detective Department in the Metropolitan Police (Morris, 2007:17 and Prothero, 1931:46). Criminal Investigation Departments were common in most forces by the mid to late nineteenth century but the low incidence of homicide meant it was difficult for individuals to build up any significant experience of their investigation. There were fewer still who had both the investigative experience and the management skills needed to coordinate the scale of investigation that many homicides required. This was particularly true in smaller forces and they tended to manage the situation by calling on the assistance of larger ones which had more experience of homicide. This was usually the Metropolitan Police and such was the demand on them that in the early 1930's they had five Detective Chief Inspectors attached to the CID Central Office who were on call to provide assistance to provincial forces (Prothero 1931: 215).

As forces grew larger through the amalgamations of the twentieth century the practice of calling in someone from another force gradually fell into disuse. But the selection, training and development of SIOs, and all other detective roles, remained a local affair. People learned on the job and there was no formal assessment of their competence (Stelfox, 2009:37). This naturally led to variations of practice both between forces and sometimes even within forces.

Furthermore, the belief that criminal investigation was broadly similar to all other policing functions meant that little attention was paid to the development of specialist management systems that enabled Chief Officers to quality assure homicide investigations, influence their direction or to take remedial action when things went wrong. The limitations of this approach were exposed during the period from the early 1970s through to the late 1990s by a series of high profile problems ranging from miscarriages of justice to failed investigations and corruption scandals.

Below is a short list of the most well-known cases:

Date	Case	Description
1972	Maxwell Confait	Police conduct in the interview of juveniles led to murder convictions that were subsequently overturned on appeal. There were also concerns about poor standards of pathology. Such was the public disquiet over this case that Sir Henry Fisher, a retired High Court Judge was asked to examine the case and report to Parliament. Although his report remained confidential, it was instrumental in leading to the Royal Commission of Criminal Procedure in 1979.
1974 to 1976	IRA Cases: Guildford Four, Birmingham Six, Maguire Seven, Judith Ward	A number of investigations into homicides committed by the IRA, which resulted in convictions of groups and individuals. From the outset these cases were mired in controversy with allegations of torture, fabrication of evidence, suppression of evidence favourable to the defence, flawed forensic processes and a range of other issues. High profile campaigns to overturn the convictions were waged for many years and eventually led to successful appeal hearings that exposed the extent of the problems in the original investigations. This led to the establishment of the Royal Commission on Criminal Justice in 1991.
1975 to 1981	Yorkshire Ripper Case	This was a series of murders of females in West Yorkshire and Greater Manchester by Peter Sutcliffe who became known as the Yorkshire Ripper. The investigations into these crimes were widely considered to be incompetent and a subsequent enquiry by Chief HMIC Byford in 1982 made a range of recommendations, the most noteworthy of which was development of Major Incident Room Standardised Administrative Procedures (MIRSAP), the introduction of the

		Home Office Large Major Enquiry System (HOLMES) and the introduction of reviews as a standard procedure in major enquiries.
1974 to 1989	West Midlands Serious Crime Squad	The squad's remit was mainly organised crime but it was also involved in homicide investigation, including some of the IRA cases noted above. From its inception, the squad was the subject of complaints from suspects, courts and other police forces that were brought in to investigate individual cases. These centred on allegations of ill treatment, the fabrication of evidence, corruption and incompetence but despite the scale of the allegations, chief officers continued to support the squad. Only when newly developed forensic techniques showed conclusively that many of the confessions obtained by the squad were fabricated did the Chief Constable disband it.
1993	Stephen Lawrence	The failure of the police to properly conduct an investigation into the murder and deal professionally with Stephen's family led in 1998 to the Macpherson Inquiry. In addition to its well-known finding that the police were institutionally racist, the inquiry uncovered a catalogue of poor practice and management failure.

More cases could be included in the above list, but the ones noted above serve to highlight the inability of Chief Officers to quality assure complex cases or to take effective management action when problems arose. In many cases, Chief Officers compounded the problem by providing high profile support to the original investigations, in some cases for decades, before eventually capitulating in the face of overwhelming evidence of their flaws. A close reading of these cases also shows that these flaws were not simply related to the headline issues but extended to routine ones such as poor case management, lost exhibits and files together with poor control of forensic and other investigative processes. Such systemic issues were unlikely to be confined to these cases only and are indicative of more widespread problems.

These cases, and others like them, appear to have persuaded politicians that the police service was incapable of putting its own house in order and so they introduced a range of legislative and administrative measures aimed at ensuring good practice. These include, amongst others, the Police and Criminal Evidence Act (PACE) 1984, Criminal Procedure and Investigations Act (CPIA) 1996 and the Regulation of Investigatory Powers Act (RIPA) 2000, all of which provided tighter

regulation of the investigation process than had hitherto been the case. Other changes included the establishment of the CPS to distance police decision making from the prosecution process, the establishment of an independent capacity to investigate the police (currently the IPCC) and the establishment of the Criminal Case Review Commission (CCRC).

Whilst these legislative and procedural changes were taking place, many of the sub-processes of criminal investigation that were central to the success of homicide cases were quietly undergoing increased levels of specialisation. Thus, the role of crime analysts, crime scene investigators, search advisors, interview advisors, investigative behavioural advisors, and others became highly specialised roles that had their own working practices and oversight structures that were independent of individual SIOs. At the same time, forensic services increased in all sorts of areas from the traditional examination of scene material to telecommunications and internet traffic.

An increased focus on victim needs and community safety also saw the development of the role of Family Liaison Officers and the emergence of community reassurance as a key strategic aim of homicide investigations.

Reviews had become a standard feature of homicide investigation following the Byford Report and provided Chief Officers with a means of quality assuring investigations independently of the SIO. From the beginning of this century, Gold Groups became more common and provided Chief Officers with a more formal means of influencing the strategic approach to individual investigations than they had hitherto had.

Taken overall, these changes resulted in:

- a highly specialised legislative structure with which investigations had to comply,
- an independent CPS with oversight of the quality of decision making and evidence with whom SIOs had to work closely,
- a range of specialist roles that had to be deployed and managed,

- a wealth of forensic techniques that needed to be understood sufficiently well to know how to deploy them to best advantage,
- the emergence of good family liaison and community reassurance as goals within the investigation strategy,
- improved governance structures for Chief Officers.

Despite the extent of these changes, the selection, training and development of SIOs, who had the most responsibility for delivering change on the ground, continued pretty much as it always had. Some forces embraced change more than others, but it was not until 2004 that there was formal recognition at a national level that investigation was a complex activity that required specialist roles if it was to be carried out effectively (HMIC 2004: 173). This was followed in 2005 by the introduction of the Professionalising Investigation Programme (PIP). PIP level 3 focused specifically on homicide investigation and thoroughly revised the selection, training and development of SIOs to ensure that they had the skills and knowledge they needed to manage this demanding area of police work.

PIP was the culmination of a long and difficult process which transformed the system of homicide investigation from a largely ad-hoc and locally varied affair to one which was common throughout the UK. This common system is underpinned by national standards and staff who are professionally qualified to carry out their roles.

4. Summary

Any narrative that explains the system of homicide investigation in the UK has to start with public expectations of police competence in this area. From the outset of the police service in 1829, these have been very high and require the police to maximise the chance of success in every case. This differs significantly from public expectations for other crime types, where they are willing to accept that the police will optimise their use of resources to achieve an acceptable overall detection rate.

These expectations are mirrored throughout the criminal justice system, by politicians and in the media. But an examination of the period between 1970 and 2000 shows that simply achieving detections is not enough. The service needs to ensure that those detections are achieved legally and ethically and can be defended over the long term. Furthermore, the way that investigations are conducted must meet the diverse needs of victims' families and communities.

What has developed from that era is an increased body of legislation, specialist investigative roles, forensic services and technology that can be used in the investigation of homicide. These have to be deployed in a fast changing and diverse society which has a far greater capacity to scrutinise and comment on police actions through social media than ever before.

The role that is central to delivering a service that meets public expectations and using the available legislation and resources to do so, is that of the SIO. PIP 3 has sought to provide Chief Officers with the confidence that SIOs are selected, trained and developed to a national standard that ensures they are able to meet these challenging demands. Other resources are of course important. One could point to HOLMES, MIRSAP, search, interview or analytical resources, and any number of others that are used in the investigation of homicide. But it is the role of SIO that ensures that these other resources are deployed flexibly to meet the demands of individual cases, communities and forces.

5. Conclusion

Costs undoubtedly have to be cut. It makes sense to examine the component parts of the system for homicide investigation to see how they might be delivered more cheaply. The number of SIOs and how they are deployed is clearly a question that will arise as is the degree to which costs could be saved by merging the skills sets of SIOs across a broader spectrum of serious crime types such as terrorism, organised crime and sexual offending. However these questions are answered, what is clear is that we need sufficient SIOs to satisfy the public demand for maximum success in the investigation of homicide. History suggests that saving money by neglecting the selection, training and

development of SIOs could be disastrous for the police service because, as the saying goes, "Those who cannot remember the past are condemned to repeat it."

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Index of the Journal of Homicide and Major Incident Investigation

Back copies of the *Journal* are available on-line at the Criminal Investigation Research Network <http://criminology.research.southwales.ac.uk/journal-of-homicide/>

Author	Title	Volume Issue Page
Adcock, S.	Financial Investigations: SIO Considerations	6.2.61
Ashcroft, G. Pearson, S.	Managing the Relationship with the Family Liaison Officer	3.1.59
Atherley, A.	Honour Related Violence: Context, Culture, and Consequences	3.1.21
Baker, A. Richards, L.	Prevention of Homicide and Serious Violence	1.1.3
Baker, R. Birch, J.	Operation Wirok: The Discovery of Skeletal Remains in the Birmingham Main Line Canal	7.1.57
Beer, J.	Legal Attendance at Post-Mortem Examinations	3.1.85
Berry, R.	Operation Pentameter 2 (UKP2): An overview for the major crime investigator	5.1.53
Blackwood, N.	International Investigations: Current Challenges to British Policing	9.1.39
Book Review	Discovering Through Death: Beliefs and Practices	7.2.84
Book Review	The Ascent of the Detective: Police Sleuths in Victorian and Edwardian England	7.2.86
Book Review	Effective Investigation of Child Homicide and Suspicious Death	8.1.91
Book Review	Blackstone's Senior Investigating Officers Handbook (Third Edition)	9.1.103
Book Review	Blackstone's Emergency Planning, Crisis and Disaster Management (Second Edition)	9.2.102
Bottomley, M. Holt, C.	Familial DNA: a relative success?	7.2.4
Bottomley, M. Holt, C.	The Use of Familial DNA Searching Post Protection of Freedoms Act 2012	9.1.24
Brookman, F. Lloyd-Evans, M.	A Decade of Homicide Debriefs: What has been learnt?	10.1.14
Brunning, M.	Operation Darcy: Serial Killer Joanne Dennehy.	9.2.26
Byron, G.	Forensic Science Support to Critical and Major Incident Investigations: A service Based Approach	5.2.75
Carr, L.	Case Study of Mark Corner, the Murder of Two Sex Workers in Liverpool	6.2.75
Clayman, S.	To Snitch or Not To Snitch? Bridging the Gap Between Research and Practice	7.1.103
Cole, T. Brown, J	When is it best to seek assistance from a Behavioural Investigative Adviser?	8.1.62
Cunningham, D.	Crossing the Line: An international case study	4.2.15
Davies, P. Green, J. Price, D. Fyfe, P. Nicholls, G.	The Investigation of Deaths on Land or Premises Owned, Occupied or Under the Control of the Ministry of Defence: Protocol	2.1.33
Derbyshire Constabulary	Derbyshire Constabulary Child Exploitation Investigation Unit: Intervention strategies	5.2.39
Devoil, T. Ryan, S. Thompson, M.	Managing and Preventing Critical Incidents	3.1.3
Dismore, O.	Air Support: so much more than just a pretty picture	5.1.27
Donnelly, K.	Operation Sorrento: The investigation into the murder of Pamela Jackson	10.1.48
Doyle, M.	Non-suspicious Death (Or Is It?): The Duties and Responsibilities of the	7.1.45

	Police	
Earl Robinson	Offering Monetary Rewards: A Useful Investigative Tactic When Trawling for Witnesses	7.1.89
Editorial	Editorial	3.2.3
Editorial	What Price Professional Practice?	7.2.1
Editorial	Getting Involved with the Homicide Working Group	8.1.1
Ellis, J. Thompson, S. Bardsley, R. Jefferies, I.	Demystifying the World of Body Search and Blood Dogs	7.2.45
Focus On	Forensic Gait Analysis	4.1.83
Focus on	Forensic Linguistics	4.2.111
Focus On	Forensic Anthropology	5.1.95
Focus On	The National Injuries Database	5.2.87
Focus On	Forensic Pathology	6.2.103
Fox, J.	The Police Response to Infant Deaths	1.1.61
Fox, J.	Are We Killing the Goose?	3.2.67
Fox, J.	Statutory Reviews and the Homicide Investigation	7.2.24
Fox, J.	Is there room for flair in police major crime investigations?	9.1.2
Fox, J.	Statutory Reviews and Homicide Investigation Revisited.	9.2.80
Gerrard, G.	CCTV and Major Incident Investigation: Professionalising the Police Approach	3.2.7
Gradwell, M.	Lost in Translation: The use of interpreters during Operation Lund	2.2.3
Green, R.	Do They Know More Than We Do? What Opportunities Are To Be Gained From Data Held by Other Organisations?	3.2.59
Gregory, A. Rainbow, L.	Enhanced Prioritisation of Familial DNA Searches	7.1.75
Harrison, I.	Protocol for Fire and Rescue Service Assistance to the Police in the Search for Missing Persons	2.2.21
Harrison, M. Donnelly, L.	Buried Homicide Victims: Applied geoforensics in search to locate strategies	4.2.71
Hart, A. Amoret, M. Whitaker, P. Hall, M.	The Use of Forensic Entomology in Criminal Investigations: How it can be of benefit to SIOs	4.1.37
Heath, S.	Using Multi-agency Data to Reduce Deaths from Drug Abuse in Scotland	1.1.15
Hedges, C. Robinson, K.	Child Rescue Alert – saving endangered children.	9.2.41
Hepworth, M.	Operation Bevel: An Insight on How to Manage a Multi-death Investigation in a Healthcare Setting	7.1.35
Herdale, G.	The Legal Framework for Acquiring and Using Passive Data for Policing Purposes	3.2.29
Heydon, T.	Operation Hydration: Internet Murder Enquiry	6.2.23
Hutchinson, T.	The SIO and the Tier 5 Interview Adviser	4.1.25
HWG	HWG National De-brief Model	9.1.79
Jackson, M.	Linked Series Stranger Attacks and Homicide: The debrief of Operation Yeaddiss and related offences	5.1.5
Jackson, M. Brown, D. Watson, D.	Police Investigation of Healthcare Incidents in Community Settings	7.1.19
Jackson, M. Smith, A. Watson, D.	Mental Health Homicides a Joint Police and NHS Approach	8.1.30
James, N.	Responding to Major Disorder in Prison Establishments and Immigration Removal Centres	6.2.87
James, P.	National Ballistics Intelligence Service: Every gun tells a different story	4.1.15
Jones, D. Grieve, J. Milne, B.	Reviewing the Reviewers: A tool to aid homicide reviews	4.2.59
Jones, D.	The Relationship Between Homicide rates and Forensic Post Mortem	9.2.58

	Examinations in England and Wales.	
Jones, I.	Investigation of Deaths Following Police Contact	2.1.93
Kirby, S. Turner, G.	Think Crime, Think Car, Think ANPR: The Use of ANPR in Major Crime Investigations	3.2.35
Lawrence, K.	Investigation into the murder of Hell's Angel Gerard Tobin on the M40: a murder committed by an Organised Crime Group	5.1.39
Linden, W. Campbell, P.	The Phoenix Database: Homicide Analysis, Action Learning and Knowledge Sharing	6.2.5
Lloyd-Evans, M.	Domestic Homicide Reviews	9.1.55
Lloyd-Evans, M. Bethell, P.	Review of Undetected Historic Serious Crime: Why bother?	5.2.3
Lowe, T. Innes, M. Roberts, C.	The Impact of Homicide on Community Reassurance	3.1.67
Maher, S.	Professionalising Investigation: An update on the SIO development programme PIP Level 3	6.1.51
Maher, S.	PIP Registration Update.	9.2.92
Marsh, N.	Injury Photography: Is it more than skin deep?	6.2.45
Marshall, D.	Child Homicides: A suspect in the family. Issues for the Family Liaison Strategy	4.1.69
Mayes, J. Brown, A. Marshall, D. Weber, A. Risdon, A. Sebire, N.	Risk Factors for Intra-familial Unlawful and Suspicious Child Deaths: A retrospective study of cases in London	6.1.77
McCabe, S.	Operation Coveyville: Double no body murder investigation	6.1.59
McNally, M.	Using the National Mobile Phone Register in Homicide Investigations	4.2.101
Mogg, S.	The Human Tissue Act 2004: Implications for the Senior Investigating Officer	5.1.83
Mooney, J.	HOLMES: From inception to modern day via lessons learned	6.1.31
Morgan, J.	Cross Border Investigation Strategy: The Sidney Cox Murder Investigation	9.2.1
NABIS	National Ballistics Intelligence Service Update	5.1.37
NABIS	National Ballistics Intelligence Service Update	5.2.57
NABIS	National Ballistics Intelligence Service Update	6.1.73
NABIS	National Ballistics Intelligence Service Update	6.2.57
NABIS	National Ballistics Intelligence Service Update	7.1.117
NABIS	National Ballistics Intelligence Service Update	7.2.42
NABIS	National Ballistics Intelligence Service Update	8.1.57
NCA	Crime Operational Support Team Update	9.1.37
NCA	Crime Operational Support Team Update	9.2.53
NCA	Crime Operational Support Team Update	10.1.46
Niven, N. Burchall, G.	The Development of Intelligence-Led Mass DNA Screening	3.1.51
Niven, N. Massie, R.	Social Networking as an Intelligence / Investigative Tool :Case Study	6.2.33
NPIA	POLKA Update - Major Crime Investigation Community	7.1.44
NPIA	NPIA Missing Persons Bureau Update	7.1.72
NPIA	Focus On: Sleep Related Fatal Vehicle Crashes	7.1.121
NPIA	The POLKA Major Crime Investigation Community	7.2.22
NPIA	UK Missing Persons Bureau Update	7.2.71
Palmer, P.	Liability for Negligent Investigation: The Osman legacy	2.2.33
Partridge, A.	Operation Castorland	7.2.73
Pearce, A. Harding, C.	Criminal Cases Review Commission: The first ten years	4.1.49
Pearson, S.	Managing Cross-Border Single Homicide Investigations	4.2.27
Porter, C.	Low Template DNA Profiling: A guide for Senior Investigating Officers	6.1.13
Rainbow, L. Gregory, A.	Behavioural Investigative Advice: A contemporary view	5.1.71
Reid, S.	Crimewatch Explained	4.2.3

Reid, S.	Media: A useful investigative tool	5.2.59
Richards, L.	Homicide Prevention: Findings from the Multi-agency Domestic Violence Homicide Reviews	2.2.53
Roach, J.	Long Interval Detections and Under the Radar Offenders	8.1.20
Roach, J.	The Devil and the Detail: Local analysis of homicide for investigators and policy makers	9.1.86
Roycroft, M.	What Solves Hard to Solve Murders? Identifying the Solving Factors for Category A and Category B Murders. Does the SIO's Decision Making Make a Difference?	3.1.93
Rycoft, M.	Historical Analysis of Public Inquiries of Homicide Investigations	4.2.43
Saleem, F.	Homicide in a Diverse World: SIO Conference Editorial 2010	7.1.5
Sawers, M.	Major Crime Reviews	4.1.3
Sawyer, N.	The Major Crime Scene De-contamination Gateway	7.2.61
Scott, I.	Investigating Drug Related Deaths	1.1.25
Scott, I.	Organ and Tissue Donation Opportunities during Police Investigations into Suspicious Death or Fatal Road Traffic Collisions	6.1.3
Smart, K.	Follow the Money: The Use of Financial Information in Major Crime Investigations	3.2.21
Smith, K.	NCPE Crime Operations: Supporting Serious and Series Crime Investigations	2.1.39
Smith, M.	The Corporate Manslaughter and Corporate Homicide Act 2007: A challenge for investigators?	4.1.97
SOCA	Crime Operational Support Update	8.1.39
Stelfox, P.	The Role of Confidants in Homicide Investigations	2.1.79
Stelfox, P.	Improving Practitioner Research into Homicide and Major Incident Investigation	8.1.75
Stelfox, P.	The HWG Practitioner Research Group Trace Interview and Eliminate Research Proposal.	10.1.88
Swift, B.	Methods of Time Since Death Estimation within the Early Post-mortem Interval	6.1.97
Taylor, S.	Operation Scotia: The investigation into the death of Georgia Varley	10.1.73
Tennet, A. Dixon, H.	Stealing Time: The Use of Passive Data During Operation Nuthatch	3.2.43
Vesely, L. Lloyd-Evans, M.	Reviews of Long Term Missing Persons and Unidentified Found Bodies	8.1.2
Wate, R.	Responding to Public Inquiries: Lessons learnt from the Bichard Inquiry	2.2.42
Wate, R. Birch, M.	Deposition Sites: Case studies Operation Fincham and Operation Sumac	4.2.87
Wate, R. Marshall, D.	Effective Investigation of Intra-familial Child Homicide and Suspicious Death	5.2.17
Watts, S.	Investigating Deaths in Healthcare Settings	1.1.37
White, G.	Prison, Probation and Immigration Related Deaths in Custody: A Protocol for Police Investigations	2.1.53
White, W.	Guidance in the Use of Serving Prisoners as Witnesses	1.1.53
Woolnough, P. Stevenson, O. Parr, H. Fyfe, N.	Investigating missing persons: learning from interviews with located missing adults.	9.2.14
Woolnough, P. Stevenson, O. Parr, H.	Investigating Missing Persons: Learning from interviews with families.	10.1.1
Wright, M. Waterfield, I.	Homicide Research Group	9.1.19
Wright, M. Waterfield, I.	Homicide Research Group	9.2.73
Wright, M. Waterfield, I.	Homicide Research Group	10.1.68
Young, H. Richards, L. McCusker, S.	Profiling Mentally Disordered Homicide Offenders to Inform Investigative Decision Making and Intervention Strategies	2.1.3