

Handbook of Firearms and Ballistics

Brian J Heard

Oxford: John Wiley and Sons Ltd (2008).

ISBN 978-0-470-69460-2

Book review by Sally Ramage for Internet Police Law Books

Introduction

John Wiley and Sons has a series of handbooks written by forensic experts.

The aim is to explain scientific expert knowledge to the layperson, as well as to judges, solicitors and barristers.

It is believed that handguns have been used since 1247 and the first recorded use of a hand cannon appeared in 1449 in the form of an illustration of a mounted soldier with a hand cannon resting on a fork attached to the pommel of the saddle. Firearms are a contemporary topic and the public needs to understand the state of firearms knowledge today. However, it is a fallacy to think that lawyers do not always grasp such expert knowledge.

R v Charles Peace (1878)

Caselaw shows that there has been very eloquent and astute cross-examination in courts where the case was won because of the barrister's good grasp of such knowledge, which he ably transmitted, to the jury.

We remember the 1878 case of Charles Peace who was charged with shooting a Blackheath police officer with intent to murder, and who nearly escaped being charged.

Threats to kill

Instead, John and William Hebron were charged with killing police officer Nicholas Cook on 1 August 1878. The Hebron brothers were suspects because they had been heard to make threats to kill the police officer Nicholas Cook for causing their arrest in an earlier incident.

Shoeprint evidence in 1878

There was a boot mark at the scene of crime and police said that it matched a boot worn by the older Hebron brothers. Apart from ballistic expert evidence, this 1878 case must have been the first ever shoeprint case, some 130 years before the established police shoeprint database.

Evidence was called to prove that William Hebron had tried to buy gun cartridges at a local ironmonger's.

Evidence was called of someone who claimed to have seen William Hebron near the crime scene minutes before the police officer's death.

However, there was also evidence that the two brothers were working at a nursery at the time when one of them was alleged to be attempting to purchase the cartridges. The brothers were tried and convicted to death.

Many local residents petitioned to reduce the death sentence to a life sentence and were successful.

A confession by Charles Peace

Later, Charles Peace confessed to the murder of police officer Nicholas Cook. Charles Peace had committed murder before 1878. On 29 November 1876, Charles Peace had shot and killed another person, Arthur Dyson, an engineer employed by the North-Eastern Railway. He was not arrested and went on to live the life of a music-loving man in a respectable neighbourhood. He was only caught after he committed a burglary at a house and was caught and arrested with housebreaking tools in his possession, after which it was discovered that he was the killer of Arthur Dyson on 29 November 1876 and he was charged with Dyson's murder.

Murderer's serious disability did not deter his crimes

This case was unique because Charles Peace was suffering a serious disability yet he managed to shoot and kill two persons in two separate incidents. At an early age, Charles Peace injured his left hand and leg whilst employed in a mill. He coped with his disability by concealing the injured hand under his coat and wearing a false arm in his sleeve. The false arm had a hook at the end where his hand should have been. Charles Peace had shot his victims by strapping his revolver to his wrist.

One thing that the Charles Peace case in 1878 still demonstrates is that violence and the possibility of injury make robbery a serious crime and this is the reason why the criminal justice system responds to such violence by punishing such robberies more harshly. Robbery violence is a by-product of robbery encounters.

The Handbook of Firearms and Ballistics by Brian J Heard has ten chapters, the topics being: firearms; ammunition; ballistics; forensic firearms examination; range of firing estimations and bullet hole

examinations; gunshot residue examination; gun-handling tests; restoration of erased numbers; qualifying the expert; cross-examination questions and classification of firearm-related deaths.

Criminology of violence

A literature review reveals that in modern times, there is a connection between drugs and crime. There is a rising homicide rate in young people. In the classical sub-cultural perspective, lower-class communities generate a distinctive amoral world, which glorifies and legitimates aggressive behaviour, especially in young men. There are high homicide rates, especially in disadvantaged communities. Scholars are aware of homicides they term 'retaliatory homicides', and 'cultural retaliatory homicides', due to problematic policing, neighbourhood culture, interpersonal violence, poverty, unemployment and disadvantage. Guns are used as a symbol of power to achieve goals by inducing compliance with the user's demands and firearms and ballistics remains a male past time. Weaponry confers power and this is another factor in gun crime, which requires expert knowledge to bring about successful convictions.

Terrorist violence

Today, firearms in the United Kingdom is also a worry connected to terrorism and the Terrorism Act 2000, s121 defines a firearm to include an air gun or air pistol and s 54 makes it an offence to instruct or train another or to invite another to receive training in the making or using of firearms, explosives, etc. Such training may be to one or more specific persons or generally and the invitation to train may be to one or more or generally. Terrorism is extreme violence and it is correct that the law should be prohibitive. Other prohibitive measures are the police power of arrest (s 41) and police power to stop and search (s 43). (See Stanisforth, (2009) A. *Blackstone's Counter-Terrorism Handbook*, Oxford: Oxford University Press, at pgs 292-3).

Successful convictions: knowledge of ballistics & firearms

To achieve successful conviction, prosecutors need to understand the basics of firearms and ballistics and this book by Heard is fit for that purpose. It is good that the barrister, police officer, solicitor and layperson understand some of the ways that conviction is secured.

Evidence is rapidly lost from the surface of hands and within three or four hours, all gun shot residue ('GSR') particles will have been lost from the hands, (as those who saw the recent movie titled *Fracture*, in which Anthony Hopkins played the part of a husband who shot his adulterous wife in the face and proceeded to wash his hands and face thoroughly with soap and very hot water to wash away any residue before the police arrived). Brian J. Heard explains it well on page 259 of his book:

'... the GSR vented from the breech end of a pistol is of low velocity. In addition, as such, particles can only be found on the surfaces immediately surrounding the breech of the weapon, that is, the hands. The likelihood of any GSR particles being found on any of these alternative sites, unless a strong wind is blowing towards the firer, is therefore small'.

A single microscopic speck of GSR-grounds for appeal

Using the 'Jill Dando' murder case example, in which Barry George was prosecuted for her murder, Brian Heard reminds us that the Criminal Cases Review Board had found that Barry George had a right to appeal because his conviction was founded on *a single particle residue*.

The appeal court found that, at Barry George's trial, the jury had been *misled* about the significance of a single microscopic speck of GSR found in the lining of an inside pocket of Barry George's overcoat. Brian J. Heard explains what particles are to be flagged for further investigation, and eliminated from further investigation for potentially negative samples. He explains that in the Barry George murder prosecution, there were 200 fields that must be examined on the sample stub.

Forensic firearms examination

Chapter 4, on forensic firearms examination, is a fascinating chapter. Since 1900, there has been an established firearm identification process. The *Buffalo Medical Journal* had then published an article, which revealed that bullets fired through different makes and types of weapon, of the same calibre, were impressed with rifling marks of varying type. Today, experts can reveal whether there was an accidental discharge by a faulty lock mechanism, a failure of the safety mechanism or by inadvertently pulling the trigger, especially when the weapon is violently pulled away from the person holding it.

Conclusion

In sum, this book has been very enlightening. It illustrates that a highly technical subject can be explained to a non-expert. It is a useful reference book for lawyers.

ENDS+