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## When science doesn't meet the law: addressing the absence of forensic skills in law degrees

### Abstract

*This short article outlines the development of an educational package to bring forensic science into the law curriculum. It details a current project at Leeds University, in collaboration with forensic science educators from Staffordshire University.*

### Scientific Illiteracy and the Legal Profession

The perceived 'scientific illiteracy' among the general public can be seen to extend its reach into the legal profession. This is perhaps not surprising when looking at the scientific education of law students, most of whom have not studied any scientific discipline post-16. Of the 214 students given an unconditional offer to study the LLB (Bachelor of Laws) at Leeds commencing in 2007, just 39 (18.3%) had at least one science A-level (biology, chemistry, physics or human biology)<sup>1</sup>. The traditional law degree dilates this educational lacuna by failing to introduce law students to the most basic of scientific concepts, or provide even a rudimentary grounding in the work of forensic scientists. A survey of law schools in England and Wales finds that of the 76 LLB programmes on offer, just four<sup>2</sup> advertise any 'forensic' modules available during their 3 year programme (some forensic modules may possibly be available as electives within other departments). So not only do a minority of students enter onto the law degree programme with *any* scientific background, very few will leave having come into contact with 'science' during their degree. This is then compounded by the Legal Practice Certificate which qualifies an individual to practise law (or Bar Vocational Course for aspiring barristers); this certificate incorporates *no* science.

Such omissions should be of concern when the legal system has recourse to science with increasing frequency, particularly within the realms of criminal law. Upon qualification, all lawyers are quickly required to understand and manipulate information from scientists and other experts - the onus currently placed upon the expert to make their evidence understood by the non-expert. The House of Commons Science and Technology Select Committee in 2005 stated that: 'Forensic science is now central to the detection and deterrence of crime, conviction of the guilty and exculpation of the innocent. Moreover, the significance of forensic science to the criminal justice system can be expected to intensify in years to come,'<sup>3</sup> and yet were forced to report that: 'it is of great concern that there is currently no mandatory training for lawyers in this area.'<sup>4</sup>

This shortfall in legal training can be contrasted with the situation in forensic science departments, where there is emphasis placed upon students not only learning the science, but also the legal context and the operation of the law. A forensic graduate without a grounding in the law would be rightly considered lacking in training. Forensic science students learn about courtroom etiquette and present their scientific findings as an expert witness having investigated a crime scene scenario. They give evidence-in-chief and are robustly cross-examined by science lecturers who themselves have acted as experts at court. The corollary of this for some parity in law education should be that law students **would** attend a crime scene scenario and then subsequently be examined on their science-based findings from *that* scenario.

The use of forensic science in the criminal justice system involves long chains of activity stretching from preparatory work *before* a crime is committed, for example the manufacture and supply of equipment for collecting forensic samples, through to the presentation of evidence at court<sup>5</sup>. This complex pattern demands a fundamental level of understanding of forensic activity, in order to identify issues that may have a significant impact upon the outcome of a legal enquiry. All legal practitioners should take a court-centric view of the forensic science and be able to reflect upon evidential aspects. This also then requires a thorough understanding of what the courts require from forensic

science and is reported by the recently appointed UK Forensic Regulator as a perspective “that has never been comprehensively examined”<sup>6</sup>.

The ‘problems’ with forensic science and mistakes made by experts in court are rehearsed in the media on an increasingly regular basis. Normally absent from such criticisms or wider critiques of the legal system is any examination of why it was that no lawyer was able to spot a potential issue or why no legal professional had drawn attention to errors before damage was done. Yet, criminal lawyers can avoid any scientific training throughout their education and professional development and this appears the norm. This should stimulate a wider debate about forensic skills within law degrees and legal education being ‘fit for purpose’.

#### **Introducing forensic science to law students**

In an attempt to address the lack of basic forensic science information within law degrees, this project, funded by the White Rose Centre for Teaching and Learning Excellence in Enterprise at Leeds, is developing an existing module within the Leeds law curriculum – *Forensic Process and the Law*.

Law and forensic academics first met during a conference organised by the Forensic Institute Research Network



*Figure 1: Chain of custody and contamination issues are paramount in an effective investigation.*



*Figure 2: Issues of risk assessment and health and safety at crime scenes are equally important in the legal framework of an investigation.*

(FIRN), which is an international collaboration of universities created in 2004. FIRN is a cooperative with the aim to, “improve the quality and quantity of forensic science research and teaching” and at a meeting in 2007 the idea for such a project was suggested.

Subsequently, working in conjunction with experts in forensic science education and web-design specialists, the project aims to develop a series of innovative web-based exercises and assessment for law students. The intended outcome is to have designed a resource that law students will work through as a realistic forensic-case study and present their findings in both written and oral form as part of their assessment. They will need to work through the forensic processes that would occur in the actual investigation of a criminal case.

The Crime Scene House on the Staffordshire University campus was utilised, as well as ‘actors’ and a professional forensic photographer, to enact and record a crime scene, for use in the simulated exercise. This exercise resulted in a ‘bank’ of nearly 1000 high resolution photographs which can be used by the project leaders for future developments. This large number of images allow for flexibility in the presentation of the many facets of evidence and the overall crime scene.

The undergraduate Forensic Process and the Law module (with a postgraduate variant) is a 10 credit module with a cohort of 60 students. The module descriptor states that on completion of this module, students will acquire the following subject specific skills:

- comprehend and amass data about forensic process and the law
- make well-grounded, well-structured and well-referenced oral and written presentations about the subject
- analyse and criticise the data using the policy goals and also normative standards such as human rights
- plan, develop and produce research of an appropriate level, from the information supplied and recovered.

The project is developing this module from a purely theoretical, lecture-based module, to incorporate in addition a more practical problem-solving approach where the students apply themselves to a ‘real’ crime. The work, based upon realistic situations, will clearly illustrate where law meets forensic science. This practical approach is facilitated by a web-based assessment, where students work through a

series of problems, based upon realistic criminal cases. These will be done individually by the students, and then progress into seminars based discussions. This web-based learning will enable the development of:

- critical thinking and analysis: Problem solving; creative/lateral thinking; constructing logical, coherent, cogent arguments; critical reading and manipulation of complex materials
- fact finding: utilising variety of resources; application of law to the facts; use of different disciplines outside of law,

use of information technology to retrieve resources; understanding and working with both scientific and legal rules and procedure.

The exercises will also demand of the students, initiative and problem-solving skills as well as stimulating creativity and team-work.

Participants will be required to take on the decision making roles of the Forensic Scientist/ police investigator/ legal representatives (defence/ prosecutor) and ultimately, judge. They can compare their outcome with the real outcome of the case. They should then develop an awareness of the decision making and constraints that govern

the use of the science within the criminal justice system. It is expected as an outcome of this work that law students will develop the following:

- an appreciation of the role of a forensic scientist within a criminal investigation
- an understanding of how the use of science is prioritised within an investigation
- an awareness of how the application and use of science is justified within a criminal investigation
- an understanding of the different roles/ agencies involved in a complex criminal investigation and how these intersect
- an appreciation of how scientific evidence fits within a prosecution or defence case and how decisions made during investigations impact upon evidence which may be presented at trial.

This innovative development should begin to tackle the scientific shortfall in the training of law students. At some future point, a reflective analysis of the impact of such forensic-training should be undertaken to determine the usefulness of this initiative and this indeed could be fed back to the UK forensic and legal regulatory bodies to consider rolling out

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such a programme of study nationwide. This is clearly only a start for the undergraduate training process where hopefully forensic science will meet the law in a complimentary fashion rather than simply head-on in the courts.

#### References/Notes

1. A further 54 had maths or psychology A-level.
2. University of the West of England; Huddersfield; Leeds and Sussex.
3. House of Commons Select Committee on Science and Technology, Forensic Science on Trial (2005) (HC96-1) p.8.
4. *ibid.* p.79.
5. Forensic Science Regulator Business Plan 2008-9, p.9
6. *ibid.* p.10.

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