Studies in History and Philosophy of Biological and Biomedical Sciences 44 (2013) 47–59

Contents lists available at SciVerse ScienceDirect

Studies in History and Philosophy of Biological and Biomedical Sciences

journal homepage: www.elsevier.com/locate/shpsc

Renegotiating forensic cultures: Between law, science and criminal justice

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ARTICLE INFO

Article history:
Available online 28 September 2012

Keywords:
Forensic cultures
Scientific evidence
Expert witnesses
Adversarial trials
Criminal justice

ABSTRACT

This article challenges stereotypical conceptions of Law and Science as cultural opposites, arguing that English criminal trial practice is fundamentally congruent with modern science's basic epistemological assumptions, values and methods of inquiry. Although practical tensions undeniably exist, they are explicable—and may be neutralised—by paying closer attention to criminal adjudication's normative ideals and their institutional expression in familiar aspects of common law trial procedure, including evidentiary rules of admissibility, trial by jury, adversarial fact-finding, cross-examination and the ethical duties of expert witnesses. Effective partnerships between lawyers and forensic scientists are indispensable for integrating scientific evidence into criminal proceedings, and must be renegotiated between individual practitioners on an on-going basis. Fruitful interdisciplinary collaboration between scholars with a shared interest in forensic science should dispense with reductive cultural stereotypes of Science and Law.

When citing this paper, please use the full journal title *Studies in History and Philosophy of Biological and Biomedical Sciences*

1. Cultures of law and science

> I went back into Mr Blake's room, and knocked at the door of communication. Mr Bruff opened it, with his papers in his hand—immersed in Law; impenetrable to Medicine.
>
> Wilkie Collins, *The Moonstone* (1868)

The notion that 'law' and 'science' inhabit opposite sides of an elementary disciplinary divide is a familiar trope of modernity. On this, somewhat hackneyed view, Law and Science represent different systems of practical authority with their own distinctive institutions, experts and cultures. It is an old and intuitively plausible idea, with diverse literary expressions and diffuse cultural resonance. In his 1959 Rede Lecture, C.P. Snow famously lamented the artificial separation of hard sciences and the humanities into two increasingly estranged cultures. Almost a century earlier, Wilkie Collins—in what many regard as the first work of detective fiction in the English language—portrayed Mr Bruff, the solicitor, as the personification of legal scepticism towards medical science, resolutely unimpressed by the 'scientific experiment' devised to solve the riddle of the Moonstone's disappearance. (To give Bruff his due, the experiment failed.) Echoes and variations on the generic 'two cultures' theme are frequently encountered in socio-legal and historical scholarship, where, 'men of science' line up against 'men of law';[1] or, varying the metaphor, Law and Science are locked in a fractious 'marriage of opposites'.[2] Significantly upping the ante, two forensic scientists discern a 'clash of two civilizations'.[3] According to a distinguished committee of jurists and law reformers, 'Law and Science are both sceptical disciplines, and when each examines the other it does not always like what it sees'.[4] Susan Haack, an eminent philosopher of science, offers the following pithy summing-up:

> [T]here are deep tensions between the goals and values of the scientific enterprise and the culture of the law, especially the culture of the US legal system: between the investigative character of science and the adversarial culture of our legal system; between the scientific search for general principles and the legal focus on particular cases; between the pervasive fallibilism of

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[1] Jones (1986).
[2] Wonder (1989).
[3] Brown and Willis (2009), p. 196. This observation is made 'perhaps with some hyperbole'.
[4] Justice (1991), para. 3.1.

1369-8486/$ - see front matter © 2012 Published by Elsevier Ltd.
http://dx.doi.org/10.1016/j.shpsc.2012.09.010

> the sciences—its openness to revision in the light of new evidence—and the concern of the law for prompt and final resolutions; between the scientific push for innovation and the legal system's concern for precedent; between the informal, problem-oriented pragmatism of scientific investigation and the reliance of the legal system on formal rules and procedures; and between the essentially theoretical aspirations of science and the legal system's inevitable orientation to policy . . . [U]nderlying these familiar complaints are . . . deep tensions between the goals, the processes, the values, and the timetable of scientific inquiry, and legal goals, processes, values, and schedules.[5]

This diagnosis is instantly recognisable as symptomatic of two cultures clashing, but also somewhat puzzling in its application to modern criminal proceedings; and equally perplexing on both counts. It is puzzling because it would be just as easy to point to enduring cultural tropes and narratives celebrating the successes of forensic science. In Mark Twain's 1894 novella *Pudd'nhead Wilson* fingerprints collected and presented to the jury by the eponymous hero, *a lawyer*, dramatically exonerate the accused by revealing the identity of the true murderer to a rapt courtroom.[6] From Sherlock Holmes to *CSI*, consumers of popular crime fiction have been educated to expect that scientific means of detection and evidence-gathering will successfully solve crimes and put offenders behind bars. Moreover, fiction mirrors the realities of contemporary criminal proceedings, at least to the extent that it depicts increasing reliance on both well-established and innovative forensic science techniques in criminal detection, evidence and proof (operational details, of course, are often heavily fictionalised and often far removed from reality).[7] Perhaps an important distinction should be drawn between criminal investigation, which presumptively shares many of the assumptions and methods of modern scientific inquiry, and 'law', which supposedly does not. But this concession would still not account for many of the points of tension described by Haack. For example, criminal investigations (like Law but unlike idealised Science) focus on particular cases, follow formal rules and procedures, and seek prompt and final resolutions to allegations or suspicions of criminal wrongdoing.

The simplistic image of Law and Science encamped in their separate cultural silos immediately blurs and fades when *forensic science* is recognised for the inveterate hybrid that it has always been. Digging down to its etymological roots, 'forensic science' *means* science applied to the administration of justice. Historically, it is the science of the (Roman) forum, and consequently of the law courts and of judicial evidence and proof. Is the constellation of techniques, specialist knowledge, processes, institutions and practices constituting modern forensic science best characterised as part of the broader culture of Science, or as a chapter of Law, or as a discrete *forensic* culture in its own right? There could be different, equally valid answers to that question, partly depending on what the questioner wants to know, and why. A blending of cultures might produce entirely new and *sui generis* forms of scientific expertise. Thus, one can intelligibly ask whether particular forensic scientific disciplines or techniques satisfy the methodological protocols of their disciplinary parents in physics, chemistry, engineering, biological sciences, or whatever. Viewed in broader context, 'the very production of scientific knowledge and techniques is bound up with developments in the law',[8] suggesting that any division of social phenomena into discrete 'cultures' is always artificial and arbitrary, in the sense that cultural dividing lines could be drawn differently, at different times, for different purposes. Science is conducted within the trammels of the law; lawyers and scientists do not *literally* live in different worlds. Collaboration rather than conflict might be emphasised. Science then appears as Law's dependable auxiliary in the eternal pursuit of justice, just as legal regulation reciprocally 'co-produces' scientific innovation and technology transfer in other fields of human endeavour and social engineering.[9]

These preliminary reflections suggest one, peremptory, response to the 'two cultures' story: Science and Law are not cultural opposites in forensic contexts, because forensic science is not Science, as portrayed by the idealised Mertonian conception. (STS scholars might want to add that real science never is.) Simon Cole's contribution to this special section develops the thought (with which I have considerable sympathy) that 'forensic culture', if it exists,[10] 'is a culture quite different . . . from the culture associated with research science' and from every other sphere of applied science.[11] A more fundamental methodological objection to 'two cultures' thinking might query the robustness of 'culture' as a meaningful analytical category.[12] Culture is certainly useful linguistic shorthand. We can intelligibly differentiate 'legal culture' from, say, 'political culture', or 'managerial culture', or 'lay culture' (think of jurors in the courtroom), or 'medical culture', or—why not—'scientific culture'. We can also distinguish between 'police culture', 'prosecutor culture', 'defence lawyer culture', 'judicial culture', or even the culture of appellate courts as distinct from the culture of first instance criminal trials. Again, we might counterpose 'English legal culture' with French or German or Russian or Chinese legal culture, or attempt more ambitious generalisations comparing 'Anglo-American' or 'common law' culture with its 'continental'/'civilian', socialist or Islamic legal counterparts.[13] It seems plausible to suppose that particular forensic science disciplines might have recognisable cultural traits. Possibly, different labs applying the same forensic techniques might have their own distinctive institutional cultures, too. (British law schools certainly do, notwithstanding their broadly similar intellectual ambitions and pedagogical functions—a shared culture of scholarship and teaching). I do not mean to engender comprehensive scepticism about the meaningfulness of 'culture'. My point is that 'culture' operates as a linguistic placeholder with different meanings in different contexts, sensitive to the speaker's criteria of salience and scale. Global legal culture and the culture of Nottingham Crown Court have certain things in common, but also very striking differences. Another reason to be puzzled about the claim that Law and Science represent opposed cultures, then, is that it is far from obvious what this claim is actually supposed to entail. Conceivably, it could stand for a bundle of related claims, or for one or more discrete contentions. Different, equally eligible interpretations of the 'two cultures' critique might be inconsistent or mutually incompatible.

Here are some more concrete interpretations of what might be intended by the claim that Law and Science occupy opposed cultures (partly drawing out the implications of Haack's charge-sheet):

[5] Haack (2009), pp. 2, 7.
[6] See Mnookin (2001), Cole (2001), pp. 134–5.
[7] Williams and Johnson (2004), Fraser and Williams (2009).
[8] Jasanoff (1997), 19.
[9] Jasanoff (2006).
[10] Cole specifically enters this reservation, I think wisely. In what sense do, for example, fingerprint examiners, forensic dentists, toxicologists and forensic accountants share a single culture?
[11] Cole (2013), pp.XX.
[12] The analytical potential of 'culture' has been much debated between comparative legal scholars: see e.g. Cotterrell (1997), Friedman (1997), Nelken (2004 & 2007).
[13] The best introduction to legal families and traditions is Glenn (2010).