Square Peg in a Round Hole: The Inability of the Courts Effectively to Substitute Further Procedural Rules for Due Process in the Assessment of Expert Scientific Testimony in Criminal Trials

Lisa Dickson & Stephen Pethick

Following the House of Commons Science & Technology Committee report\(^2\) the Law Commission was prompted\(^3\) to consult (in 2009\(^4\)) and report (in 2011) on Expert Evidence in Criminal Proceedings in

\(^1\) Kent Law School, University of Kent.
England and Wales in order to (1) improve the reliability of expert evidence used in criminal proceedings and so (2) to avoid wrongful convictions and acquittals based on unreliable expert evidence. Its proposals aimed, amongst other things, to provide judges with uniform criteria against which to assess such reliability. But we contend that such uniformity inevitably pays insufficient attention to the many variables that are relevant in instant cases at trial. Arguments for the implementation of specific tests of reliability of scientific evidence seem to us to cut across the due process requirements of an adversarial criminal trial. The existing rules and principles of criminal evidence offer a much more flexible and appropriate method in this regard. By contrast, trial judges following the Law Commission’s rubric would often be pressed to exclude or admit evidence in a manner contrary to the general principles of criminal

---

evidence. Finally, it is important to note that in this paper we proceed by assuming that fundamental precepts of adversarial justice are (i) correct, and (ii) likely to persist as a feature of the common law of England and Wales.

It is important, as we shall see, to begin with some general observations. The detection and prosecution of crime is nowadays intimately connected to matters of science and forensic investigation. As a 2012 Government White Paper notes, ‘Forensic evidence can play a critical role in bringing offenders to justice’. The criminal justice system has not been slow to press scientific investigation into service, utilising science in a number of ways at different points within its machinery, and these operations have even come to be popularised in works of fiction, television series and through the

---

national media. But despite the narrative presented in popular accounts, academics and other professionals working within the criminal justice system routinely acknowledge that the relationship between science and criminal proceedings has been a difficult one, and has led to uncertainty at every stage of the process in question. One example concerns the use to which scientific expert testimony is put in trial proceedings. This was called into question in a series of high-profile miscarriages of justice highlighted in successful appeals from 1989 to 2005.\(^7\) In these cases convictions were quashed because of, or at least in part because of, doubt about the reliability of the scientific testimony on which the convictions rested.\(^8\) One result has been that a small academic industry has


arisen taking as its subject the proper manner in which courts should deal with science in general and with expert scientific testimony in particular.

Discussion revolves around the most appropriate method for determining the admissibility of scientific evidence. When is a new method of science to be deemed suitably developed for the purposes of the trial process? Who should determine whether the science in question is ‘junk science’ or not? Should this question be a matter of admissibility or of weight for the trier of fact to assess? Should scientists or experts determine when science is ‘ready’ to be used in court or does that encroach too far on the purview of the judge?\(^9\) Rulings and proposals proliferate, covering the spectrum from hazy ‘laissez-faire’ models (allowing the reliability of evidence to fall more or less entirely within the province of the trier

of fact)\textsuperscript{10} to the position of steadily more programmatic and precise schema intended to guide the judiciary as gatekeepers, ensuring that inadequate science never gets put to the trier of fact in the first place.

The core problem is this: though it is accepted on all sides that scientific testimony can help to explain what really happened where facts are contested at trial, courts and their actors often cannot understand the science, and so cannot properly weigh the scientific evidence. The sophistication of scientific causal explanations now frequently outruns the understanding of the court. In an adversarial system in

\textsuperscript{10} For example, the Law Commission notes that ‘Criminal courts in England and Wales therefore only rarely rule expert opinion evidence inadmissible on the ground of evidentiary unreliability. The courts tend to allow expert evidence to be admitted on the assumption that its reliability will be effectively challenged during the trial by cross–examination or by the adduction of contrary expert evidence by another party, or both’ Law Commission, \textit{Expert Evidence in Criminal Proceedings in England and Wales} (Law Com No 325, 2011) paras 3.3–3.4.
particular, this is a significant problem. Of course, there has been a long history in which successive courts have sought to accommodate the insights of science safely within criminal proceedings. Over this period, different issues have been at the forefront of judicial and academic attention at different times. However, much of the current focus is prompted by the miscarriages of justice noted above,\(^{11}\) in the idea that expert opinion evidence is presently admitted in criminal proceedings too readily, with insufficient scrutiny,\(^ {12}\) thereby allowing unreliable scientific testimony to be put before the trier of fact. Indeed the Criminal Cases Review Commission has been concerned that ‘there is no doubt that the way in which expert evidence is presented to juries, and the weight that is attached to it, will become an


increasingly important feature in appeals’. As it is accepted (almost as a truism) that the trier of fact is ill-equipped to pick out unreliable from reliable scientific testimony, it follows that some cases have come to be decided on the basis of unreliable scientific evidence. Reliability has thus become the key concept driving present judicial attention and academic debate.

Our aim in this paper is to show that the Law Commission’s response to the matters in question is misconceived and focuses on introducing process rather than ensuring due process. We divide the paper into two main parts following this introduction. In the first, we articulate our argument through three sections. The first offers some further critical comment

---

on the general frame for the Law Commissions proposals. The second addresses attention to empirical research that bears on the topic. The third section addresses matters that are more jurisprudential in character, though we will see that these are bound to the empirical research in interesting ways. In the second part we illustrate our misgivings by giving attention to the case in question, *R v I, R & T*\(^{15}\) before concluding.

**Disturbing the frame**

We have observed that issues of the reliability of expert opinion evidence frame the present debate, and form a starting point for the Law Commission proposals. However, there is cause to wonder whether the current focus on reliability of scientific testimony is fully warranted, whether in the proposals of the Law

\(^{15}\) [2012] EWCA Crim 1288.
Commission or elsewhere. After all, miscarriages of justice are not all due to the unreliability of scientific expert testimony, and indeed there is empirical evidence to indicate that such miscarriages are not even mostly due to the unreliability of scientific expert testimony.\textsuperscript{16} It is important to remember that the opportunity to bring an appeal under the Criminal Appeal Act 1968, s 2, s.23(1) and (2) allow the reliability of many kinds of evidence to be revisited on appeal, whether scientific or otherwise. It seems likely to us that the concern regarding miscarriages of justice implicating expert scientific evidence given at trial has been emphasised, through legal and media attention to the cases in question, just because the subsequent refutation of this evidence is often so striking and persuasive.\textsuperscript{17}

\begin{footnotesize}
\textsuperscript{16} See, for example, DNA exoneration commentary from the Innocence Project, available at \url{http://www.innocenceproject.org/understand/} accessed 05 April 2013.
\textsuperscript{17} See for example, \textit{R v Dallagher} [2002] EWCA Crim 1903.
\end{footnotesize}
As science progresses, so does the potential for expert testimony to be reconsidered as scientific tests improve. Thus, Holdsworth notes, ‘as knowledge increases, today’s orthodoxy may become tomorrow’s out-dated learning’.\(^{18}\) But the susceptibility of such evidence to clear refutation is a function of the strength of scientific testimony, not a sign of its weakness. In fact, the distinctive value of scientific testimony is gained, because its unreliability can be shown under empirical tests. In this way expert scientific testimony ought to be seen as the gold standard for evidence that is useful, clear and accountable, allowing for the ready prospect that successful appeals can be made on the basis of new objective scientific information. Matters are not so perspicacious and transparent for other types of evidence. To an extent this was recognised in the 2009 Law Commission Consultation Paper which commented:

\(^{18}\) [2008] EWCA Crim 971, para 57.
It is fair to say, however, that the problems associated with expert evidence can never be entirely resolved. Scientific knowledge is continuously advancing as more empirical research is undertaken, so it is inevitable that some hypotheses will come to be modified or discarded, that expert testimony based on any such hypothesis will subsequently come to be regarded as unreliable and that this will have a bearing on the legitimacy of convictions (and, to a lesser extent, acquittals) founded on such testimony.¹⁹

This problem exists not because of any failings on the part of scientific experts or their methodology, but because of the very nature of the scientific method. We are concerned about the frame for the Law

Commission’s proposals in another way too, for there is also cause to wonder whether the reliability of scientific testimony has come to be the focus of contemporary concern in part because of the special role of the judge in considering such evidence. The idea is simple enough as judges have followed *Bonython*,\(^{20}\) *Frye*,\(^{21}\) *Daubert*\(^{22}\) and other cases in assuming one or another type of gatekeeping role with regard to expert evidence,\(^{23}\) so convictions have been quashed – have been able to be quashed – where judges have erred in excluding or admitting the evidence in question. Significantly, no such appeal would be granted on the ground that the trier of fact had weighed the same evidence incorrectly, and such cases would likely not play so forcefully on public or

\(^{20}\) *The Queen v Bonython* [1984] 38 SASR 45.

\(^{21}\) *Frye v United States* [1923] 293 F 1013.

\(^{22}\) *Daubert v Merrell Dow Pharmaceuticals Inc* [1993] 509 US 589.

\(^{23}\) But note that the English position should be distinguished from that of the United States – see Liz Heffernan and Mark Coen ‘The Reliability of Expert Evidence: Reflections on the Law Commission’s proposals for Reform’ (2009) 73 JCL 488, 495.
legal minds precisely because, legally speaking, no miscarriage of justice would have taken place. In short, the special treatment accorded to expert opinion evidence by the courts creates the conditions in which miscarriages of justice can be committed, then can be quashed on grounds of error of law. As there is no comparable counterpart to this judicial gatekeeping role for other types of evidence, expert opinion evidence – including scientific evidence – has become one of the most visible examples of injustice because of evidentiary unreliability. But again, this is not a function of the unusual unreliability of such evidence but rather a function of its unusual treatment within due process in criminal proceedings. We also think it is significant that, whilst concerns about reliability presently frame calls for judicial or other intervention ahead of judgment of the trier of fact, empirical research still needs to be undertaken to ascertain whether error rate (that is, unreliability) is greater for expert scientific evidence
than for other forms of evidence. Indeed, it is difficult to perceive a justification for the distinctive treatment of the science otherwise. Information from the Innocence Project in the USA suggests that misidentification is a greater cause of injustice.\textsuperscript{24} However, there is a plain need for further, more comprehensive and more accurate study to be made; not least because the estimation of the Innocence Project is likely bound to the structural issues we discussed in the paragraphs above, rather than pointing straightforwardly to error rates per se. And of course, the simple increase in use of expert scientific testimony in trial proceedings (noted by Runciman\textsuperscript{25} in 1993, Leveson\textsuperscript{26} in 2010 and others) increases the

\begin{footnotesize}
\textsuperscript{24} Innocence Project (USA) available at http://www.innocenceproject.org/understand/ accessed 05 April 2013.
\textsuperscript{25} Royal Commission on Criminal Justice (Runciman Commission) (Report CM2263, 1993).
\end{footnotesize}
likelihood that such evidence will be the cause of injustice through unreliability, without showing that this testimony is itself more unreliable than other types of evidence. In the absence of studies that attend empirically and with careful method to the reliability of different types of evidence, the overarching frame for the Law Commission’s legislative proposals and for the contemporary debate in general must be treated as impressionistic and unsupported.

Expert opinion testimony, and particularly that of scientific opinion, has thus been unfairly and inappropriatey singled out for special attention in current debates. Such testimony appears to present a special case, in which both society and legal actors have been struck by ‘wrongful convictions in cases involving unreliable expert opinion evidence adduced

---
by the prosecution’. But this may be due to matters unrelated to the peculiar unreliability of such evidence, but rather to (1) the ability of such evidence to be struck down on appeal because of the transparency and accountability of scientific testimony in the first place; (2) the judges’ role as gatekeeper, running admissibility together with reliability, and so allowing convictions to be quashed as errors of law; and (3) the increasingly common use of expert scientific opinion testimony in criminal proceedings, which inevitably increases the likelihood of unreliable scientific evidence being led in proceedings, leading in turn to wrongful convictions on the acceptance of such evidence. To impute this last phenomenon to some peculiar unreliability of expert scientific testimony, and then to imagine that this should motivate special rules governing the admissibility of such evidence, is to raise policy on the back of a clear fallacy of

---

composition. We do not think that the increasing use of expert scientific testimony in criminal proceedings warrants the application of special rules or tests as imagined by the Law Commission. Far from being necessarily linked to the unreliability of such evidence, it is more plausible to see the increasing implication of such evidence in wrongful convictions as a product of the success of such evidence in contributing reliably to safe convictions – hence its popularity in the hands of the prosecution to begin with.28

Again, it might be thought that the increasing importance of expert scientific testimony at trial (which also corresponds to its increasing use at trial, in turn arising, presumably, because of the increasing reliability of such evidence in speaking to different matters at issue at trial) is sufficient by itself to warrant

special treatment on grounds of admissibility. Certainly the premise is put often enough.29 But we note here that there is no specific judicial gatekeeping role attaching to, say, the reliability of significant eye–witness or other direct testimony, nor has there been any significant argument made to subject such manifestly weighty evidence to some special judicial gatekeeping arbitration – precisely because such evidence should be left to the trier of fact in light of its significance. The same argument cannot reasonably now be made the other way, that expert scientific testimony should be checked first for reliability by the judge on grounds of its compelling weight in trial proceedings. And, as we have noted above, neither can the special treatment of expert scientific testimony reasonably be grounded in concerns about its peculiar unreliability. But these are, nonetheless, the

29 See, for example, Lord Justice Leveson, ‘Expert Evidence in Criminal Trials – the Problem’ (speech to the Forensic Science Society, London November 2010).
two strands that run through the literature at issue, framing the Law Commission’s and others’ proposals and rulings. We think these arguments don’t hold up, and so it turns out that disturbance done to our adversarial system (in removing factual matters in dispute from the process of cross-examination, and from the hearing of the trier of fact) depends in large measure upon arguments whose premises lack support and whose conclusions lack validity.

Of course, it must not be forgotten (and we do not) that criminal courts come principally to deliberate expert scientific evidence in a particular way, treating it not as an abstract jurisprudential question of the place of science within law, but as a concrete matter going directly to the admissibility of the testimony of experts, the admissibility of whose opinion evidence is an exception to the general exclusion of opinion in criminal trial proceedings. The judge is tasked with discharging the responsibility to admit or exclude the
expert scientific evidence as opinion evidence regarding the particular case at hand. In the Australian case of *Bonython*\(^{30}\) King CJ began his analytical treatment of the admissibility of expert testimony by noting that such evidence is admissible only where the subject matter of the opinion given is likely to be outside the experience and knowledge of a judge and jury. This much is accepted generally, for example in Australia, the USA and in courts in England and Wales.\(^{31}\) The requirement is not a function of the scientific nature of some expert testimony, but is rather a function of its admissibility as an exception to the general rule on opinion evidence. Even so, the notion that the trial judge has a gatekeeping role in relation to such evidence is thus already planted. King CJ also articulated a further universally accepted premise for the admissibility of such opinion evidence – that the expert in question has sufficient knowledge

\(^{30}\) *Bonython* (n 20).

\(^{31}\) See *R v Turner* (1975) 1 QB 834.
and experience to justify having his or her opinion placed before the jury as an expert opinion on the matter in question. This requirement allows for counsel’s objection to testimony during trial proceedings, as well as in pre–trial disclosure, where the expert in question begins offering opinion on matters beyond his or her expertise.32 Again, the relevant question falls to the judge to determine as a matter of admissibility, so here too, the judge assumes a gatekeeping role. In both cases, the gatekeeping role falls out under the idea that expert opinion evidence is an exception to the general case because it offers expert assistance to the court that would otherwise be unavailable to it in making its finding of fact.

Even in these small beginnings it is possible to trace the difficulties that courts – and thus the Law Commission – have come to grapple with. For seen this way, as responses to difficulties encountered in

32 See, for example, R v Tang [2006] NSWCCA 167.
judging the expertise of a supposed expert on a particular matter in question, the natural instinct, particularly for lower courts, is to find some further instruction or rubric to help adjudicate the matter. This instinct is further motivated by the realisation that the assessment of expertise, for any particular matter in issue, naturally runs together with the substantive assessment of both the science and scientist (where the expert opinion is scientific in nature). These forces prompt courts to look to further process in an attempt to avoid making a judgement about the science in question, on which they are ill-equipped to adjudicate. The result is the international plethora of judgments, rulings, legislative acts, academic treatises and, now, Law Commission proposals that presently crowd on the issue. Rather than addressing a single issue about the admissibility of opinion as expert testimony in England and Wales, we now have lists of accredited experts.33 We have had a Forensic Science

33 In part, through the now defunct Council for the Registration
Service, tests of the general acceptance of the science in question within that field, proposals for how novel scientific approaches should be dealt with under admissibility, tests of the reliability of the evidence in question, and arguments that reliability should, *laissez-faire*, go to the trier of fact,\(^{34}\) or be shared with the judge as an initial gatekeeper, or indeed be a matter for some pre–trial board or panel of experts. The proposals that are less schematic risk injustice because unreliable science will be put to the trier of fact; those that are more schematic risk injustice because the judiciary may exclude good science as unreliable, opposing counsel may not have the opportunity to examine it, and the trier of fact will never hear it in evidence. And pre–trial panels risk usurping the function of the court and jury altogether, particularly in light of the increasing use of scientific

\(^{34}\) See for example Moses LJ in *Henderson* [2010] 2 Cr App R 24 CA.
and other expert testimony in criminal proceedings. Academics have argued for emphasis on the trier of fact or pre-trial panels,\(^\text{35}\) whilst courts, equally predictably, have sought out further procedural rules to dispose of their obligations. Everywhere there are tensions, and everywhere there are risks. Nowhere is there a simple, clear and practical solution.

**The practical solution**

All this heat and light might well be beside the point, however. Matters seem intractable where the frame is drawn according to the present difficulties facing the courts, and where proposals are made in response to

these felt problems. But though there have been high-profile cases of wrongful convictions, there is empirical evidence to suggest that more programmatic solutions do not typically alter the practice of the courts in dealing with the issues of admissibility in question. For example, in the US context, David Faigman notices that despite appearances to the contrary, the *Frye*\(^{36}\) test, which appears restrictive in comparison to the later *Daubert*\(^{37}\) test, ‘much of the time’ produces ‘similar outcomes’.\(^ {38}\) He writes:

> While *Daubert* is often perceived and applied by the courts rigorously, it is regularly described as being a permissive test. Similarly, *Frye* is typically considered a rigorous test, but

---

\(^{36}\) *Frye* (n 21).

\(^{37}\) *Daubert* (n 22).

\(^{38}\) David Faigman ‘Admissibility Regimes: The “opinion rule” and other oddities and exceptions to scientific evidence, the scientific revolution, and common sense’ (2008) Sw. U. L. Rev. 699, 700.
is often employed in a permissive manner.\textsuperscript{39}

Lord Leveson, in a 2010 speech, notices that despite the approval of King CJ’s 3–part test in numerous decisions, ‘only the first and third limbs of this test can be said to represent the current state of English law’, noting that the English courts add ‘a fourth requirement that the expert must be capable of providing an impartial opinion’.\textsuperscript{40} The omission of the second limb arises because it requires an assessment of ‘whether the subject matter of the opinion forms part of a body of knowledge or experience which is sufficiently organised or recognised to be accepted as a reliable body of knowledge or experience’ and, according to Leveson, ‘there remains a general reluctance on the part of judges to ensure what I shall

\textsuperscript{39} David Faigman, ‘Admissibility Regimes: The “opinion rule” and other oddities and exceptions to scientific evidence, the scientific revolution, and common sense’ (2008) Sw. U. L. Rev. 699, 702–03.

term the “reliable body of knowledge and experience” condition forms part of the test of admissibility’.\textsuperscript{41} Edmond and Roberts, writing in the \textit{Sydney Law Review}, cite empirical studies that appear to show that questions in cross-examination have little impact in disturbing the faith put by juries in the testimony of experts, whilst judicial warnings to juries concerning the weight and treatment properly to be given expert testimony provides only a weak safeguard against juries left to ‘flounder and resort to general impressions’.\textsuperscript{42} Edmond and Roberts take these empirical studies to show that adversarial trial procedures are poorly equipped to deal with expert evidence. We think they show that barristers need to be better at their jobs. But regardless of this difference about conclusion, the facts remain: empirical studies


\textsuperscript{42} Gary Edmond and Andrew Roberts, ‘Procedural Fairness, the Criminal Trial and Forensic Science and Medicine’ (2011) 33 Syd L Rev 359, 368.
suggest that process and regulation little alter behaviour of court actors, be they the judiciary, barristers, the triers of fact or indeed, the behaviour of expert witnesses themselves.

**More unreliable than other forms of evidence?**

Let us emphasise our argument so far. Some scientific expert opinion evidence is unreliable. But it has not been shown that such evidence is more unreliable than other forms of evidence. Some scientific expert opinion evidence is of particular weight in criminal proceedings. But not all such scientific evidence is so weighty, and many other forms of evidence such as direct evidence from well–positioned and impartial observers might have similar or greater weight in any particular trial. So the proposals made by the Law Commission can neither be grounded in the claim that scientific – and other – expert opinion evidence is
peculiarly unreliable, nor in the claim that it is peculiarly important. We are left with two arguments for the special treatment of such evidence, and thus for the proposals suggested in the Law Commission’s report. The first is that scientific expert opinion evidence is a special case just because expert opinion evidence is a special case. Because such evidence can depend, amongst other things, on hearsay evidence gathered from the work of other experts not present at the trial, special treatment and care is warranted. The second argument is that, regardless of jurisprudential and other conceptual points, and regardless of consistency with adversarial convention and due process, the plain fact is that judges, barristers and juries do not understand a lot of complex expert scientific testimony, and so further safeguards are needed beyond those in the ordinary case, in the interests of justice and fairness to the accused. We deal with these two arguments in turn, below.
The first argument can be negated fairly easily. Any assumptions made by an expert that depend upon hearsay will either be accepted by opposing expert or counsel, or, if contested, ought properly to be contested in the normal adversarial way.\(^43\) No reason can be found for the imposition of extraordinary rules, processes or judicial intervention just because scientific expert testimony is expert opinion testimony. Rather, this first argument turns out just to collapse wholesale into the second; ie, if the evidence is to be contested it will require understanding of technical matters and terminology beyond the scope of the judge, counsel and trier of fact. It is in the context of this question that the well-known and well-rehearsed debates flood in – the extent to which the courts

---

\(^{43}\) Including, for example, through pre-trial meeting. For consideration of the role of an expert in this way see Peter Sommer, ‘Meetings between experts: a route to simpler, fairer trials?’ (2009) Digital investigation, 5 (3–4). pp. 146–152. available at [http://eprints.lse.ac.uk/21683/](http://eprints.lse.ac.uk/21683/) accessed 08 April 2013.
should accede to a deference model,\(^{44}\) the extent to which experts should give opinion about ultimate issues of fact, and the quandary that supposedly presents itself to juries when acknowledged experts disagree. Indeed, to this traditional list can now be added more colourful debates, such as those concerning CSI and Reverse–CSI effects,\(^{45}\) and so on. All of these are without question matters that are important and worthy of serious consideration on their own terms. But they do not, singly or collectively, lead to the conclusion that the judges should be gatekeepers using an additional reliability test to ensure that unreliable science does not reach the trier of fact.

Our argument here can be put succinctly. The


motivation for an additional judicial gatekeeping rule is practical, to ensure that unreliable science does not come before a trier of fact ill-equipped to consider it effectively (no-one, it appears, has promoted the gatekeeping role, or a pre-trial panel, in order to prompt a move to inquisitorial and technocratic justice by the back door). The trouble is that a pragmatic gatekeeping role does not work. This is a considerable and damaging irony in light of the practical motivation for the approach. It doesn’t work because (i) as we know, courts are loathe to implement it, even whilst citing all *Bonython*\(^46\) limbs with approval,\(^{47}\) and because (ii) even where courts try to implement it, they cannot do so confidently and

\(^{46}\) *Bonython* (n 20).

effectively.\textsuperscript{48} Indeed, it is interesting to notice, as Shaw does, that both the British Psychological Society and the Forensic Science Service have expressed doubts concerning the ability of judges to assess the reliability of scientific evidence safely.\textsuperscript{49} In short we consider that it cannot be good to suggest a test to trial judges that leaves their best implementation of it inevitably hostage to successful appeal. It cannot be good for the judges themselves, but more significantly, it cannot be good law. We now trace and illustrate these misgivings through the recent case of \textit{I, R \& T}.\textsuperscript{50}

\textbf{Reliability test}

\begin{flushright}
\textsuperscript{49} Ken Shaw, ‘Expert Evidence Reliability; Time to Grasp the Nettle’ (2011) 75 JCL 368, 371.
\textsuperscript{50} [2012] EWCA Crim 1288.
\end{flushright}
In this section we relate $I, R \& T^{51}$ to matters proposed by the Law Commission in 2011. Firstly, we describe the case in question and then we summarise in advance of our general conclusions in the final part. In the Law Commission report, the following is noted at 2.14:

Following the publication of our consultation paper, the existence of a common law reliability test was confirmed by the Court of Appeal in *Reed*, at least for ‘expert evidence of a scientific nature’; but it is to be noted that the court did not demur from the established position that there is no enhanced reliability test for such evidence.

Heffernan and others had noted, following the Consultation Paper, that the Law Commission’s remit seemed too narrow, focusing just on the corners of, and detail for, a reliability test. It was not clear there

---

51 ibid.
even was such a test in English law, and where such a narrow focus failed to embrace the many other aspects of the use of scientific testimony in courts that might otherwise have been regarded. Plainly, we agree. The Law Commission’s argument at 2.14 of its Report is a major plank in their defence of the narrowness of their focus. That is, in 2009 the reliability test was confirmed (in Reed),\(^5\) and so can now be the proper focus of attention and clarification.\(^6\) Hence the Law Commission’s subsequent proposals, arguing for statutory implementation of an enhanced reliability test of the sort specifically excluded by Reed.\(^7\) Support for the Law Commission’s fundamental proposition about current common law comes in the footnote to the section, the Law Commission noting there that in

\(^5\) \textit{R v Reed; R v Garmson} [2009] EWCA Crim 2698.
\(^6\) The decision in Reed was not available at the time of the publication of the Law Commission’s consultation document (Law Com 190, 2009) and so only became a focus in the final Report of 2011 (Law Com 325, 2011).
\(^7\) Reed (n 52).
The Court of Appeal held at [111] that while ‘expert evidence of a scientific nature is not admissible where the scientific basis on which it is advanced is insufficiently reliable for it to be put before the jury’ there is ‘no enhanced test of admissibility for such evidence’.

But these quotations fail to support the Law Commission’s conclusion. In Reed the comments are introduced at [111] with the observation that, ‘There are three relevant principles relating to the admissibility of the evidence given by Valerie Tomlinson [the expert]’. What the Court of Appeal then notes – as we can see – is that where the scientific basis for expert scientific testimony is ‘insufficiently reliable for it to be put before the jury’ then it shouldn’t be put before the jury. There is

---

55 ibid.  
56 ibid.
no express test of reliability here, contra the Law Commission’s interpretation. The Court of Appeal’s ruling is, rather, a confirmation of standing rules of evidence, particularly those going to expert opinion evidence. Indeed, this is emphasised in the following quotation in which it is affirmed that there is ‘no enhanced admissibility test for such evidence’. It is entirely possible to read the Court of Appeal’s ruling consistent with, say, the requirement of relevancy as a condition of admissibility, and/or, say, with the common law principle that the probative value of any item of evidence must outweigh its prejudicial effect in order to be admitted in proceedings. If the court had intended to affirm the existence of a distinct common law test for the admissibility of expert scientific testimony, it could just have done so. But there is more.

Thus it may be noticed that the Law
Commission, at 2.14, asserts that Reed\textsuperscript{57} affirms an established position on expert scientific testimony, that ‘there is no enhanced reliability test for such evidence’. So, there is a reliability test, just not an enhanced one. But Reed\textsuperscript{58} does not say this at all. The ruling, quoted by the Law Commission in its footnote, says instead that there ‘is no enhanced admissibility test for such evidence’ (emphasis added). And this distinction is precisely that, between there being an express reliability test (on the Law Commission’s incorrect construal) and there not being one (on Reed itself). This confusion, in one form or another, then permeates through the Law Commission’s understanding of subsequent cases in 2.15, and in footnote 34. It might also be said that the imprecision and confusion in question permeates the law itself.

In any event, there are now further judgments

\textsuperscript{57} (n 52).
\textsuperscript{58} ibid.
on the question since Reed\textsuperscript{59} in 2009 and the other cases put in evidence by the Law Commission in reporting in 2011. These cases can help our understanding of the likely success of the proposals made. Thus in June 2012 the Court of Appeal heard an appeal from the Crown Court in Hull, in which the prosecution applied under s.58 of the Criminal Justice Act 2003 for judgment against a ruling by the trial judge (His Honour Judge Sampson) to exclude expert scientific evidence that the prosecution wished to adduce. We examine this appeal, \textit{I, R & T},\textsuperscript{60} below. It relates to the Law Commission’s proposals simply because it illustrates the difficulties courts have (at trial, or on appeal) in attempting to implement an enhanced reliability test such as that proposed by the Law Commission.

\textsuperscript{59} ibid.
\textsuperscript{60} \textit{I, R & T} (n 15).
Closer look at I, R & T

The application concerned the admissibility of an established scientific test, the CIE test, on which the prosecution sought to rely in evidence. The case concerned whether a farmer and his daughter had processed animal blood correctly by heating it to 133 degrees centigrade for twenty minutes, as per the relevant regulations. It was accepted by the trial judge that the CIE test ‘is a well-established and highly reputable test with a variety of applications’.\(^{61}\) One of these applications is to ‘test for the presence of animal proteins in the blood. If the blood has been heated to a temperature in excess of 75 degrees no animal proteins will be found’. The trial judge noted that the ‘presence of animal protein would therefore demonstrate that the blood had not been heated beyond 75 degrees, and, moreover, in the context of this case not processed to 133 degrees centigrade in

---

\(^{61}\) ibid [12].
accordance with the required standard’. The relevant evidence showed that animal proteins were found in the blood in issue. However, the blood sampled was also found to contain no bacteria (clostridium bacteria, it was noted, are destroyed at 120 degrees), and this fact, i.e. the lack of bacteria, appeared to be inconsistent with the reliability of the CIE test. Moreover, as the trial judge noted, it was accepted by both prosecution and defence that ‘CIE testing has never before been applied to blood which has purportedly undergone processing/storage/onward distribution in/at/from a plant such as [that in question].’ He continued, ‘No similar plants have been tested to compare results following a CIE test. The D’s submit that although this is a reliable test it is being applied in a novel context without evaluation of its efficacy in that context’.

The trial judge then offered his view, that ‘The

---

62 ibid [7].
63 ibid [14].
test for admissibility of scientific evidence is not straightforward. There is no single universal test in common law or in statute. There are factors which offer guidance to the judge when deciding the admissibility of scientific evidence’. He continued:

In my judgment the test for admissibility of the CIE test is that which is set out in paragraph 12 of the defendants’ submissions: Is the underlying science sufficiently reliable to be admitted in a court of law? The simple answer to that question in this case is ‘yes’, but in my judgment the better answer is yes unless there are factors over and above the vague and fanciful that cast doubt on the reliability of the CIE test in the context of/on the special facts of this case.64

As the trial judge did indeed consider that there were

---

64 ibid [15].
such factors in the present case, he ruled that the evidence drawing on the results of the CIE test was to be excluded from the trial proceedings.

The trial judge thus appears to have applied an enhanced reliability test similar to that proposed by the Law Commission. Support for this can be found in the Law Commission report’s proposals at 5.35 (1) (b), (c), and (h), and – perhaps particularly – at (3), and in Clause 4 and Part 1 of the schedule, particularly at 4 (2) (d) & (e). Moreover, the trial judge’s approach makes robust sense, because the assessment of reliability surely cannot be understood restrictively here, but must be interpreted broadly, to mean reliability with regard to the circumstances in question (as it happens, per the Law Commission’s 4.1(2)(d)). Otherwise courts might rule admissible a procedure for scrambling eggs (certainly reliable, if only for that purpose) notwithstanding its unorthodox

\[65\] ibid [16].
application in an instant case, for example in the drawing of conclusions about the presence of DNA at the crime scene (certainly unreliable for this purpose). But, interestingly, the Court of Appeal disagreed. The Court’s judgment was that once the trial judge had ruled that the CIE test is a ‘well-recognised and reliable test for establishing whether or not animal protein is or is not present in blood’, the test results were admissible. The Appeal ruling noted further that, ‘The fact that the test was used for a new purpose, or in a new context, did not of itself render the test unproven’. 66 The Appeal judgment then addressed the trial judge’s further comment; i.e. in holding that in answering the test he ought further to consider whether ‘there are factors over and above the vague and fanciful that cast doubt on the reliability of the CIE test in the context of/ on the special facts of this case’. This, the Appeal Court ruled, was to ‘confuse the question of admissibility with the question whether, if admitted,

66 ibid [29].
the expert evidence was such that on its basis a jury could properly convict I’.\textsuperscript{67} In consequence the Court allowed the appeal.

**Final thoughts on I, R & T**

It appears to us that the trial judge did nothing wrong in coming to his ruling at trial. Notably he does not suggest an addition to the relevant test of admissibility, which is approved both by him and the Court of Appeal in its ruling. Rather, the trial judge’s regard to additional matters (i.e. those ‘over and above the vague and fanciful that cast doubt on the reliability of the CIE test in the context of/on the special facts of this case’) is invoked by him in his attempt to answer the accepted test. The trial judge thereby employs an enhanced method in reasoning to his conclusion on admissibility. It is ‘enhanced’ in the

\textsuperscript{67} ibid [30].
sense adopted by the Law Commission (viz. its proposals at 4(2)(d) and (e)), and in the straightforward sense that it is demonstrably more restrictive than the Court of Appeal thought permissible under existing law. The trial judge’s deliberation is reasonable – so reasonable, in fact, that it is difficult to comprehend how a reasonable judgment about admissibility could be made without attending to the contextual matters he puts in question. And this is because the law cannot easily or effectively cut issues of reliability at the joints. In short, reliability is reliability all the way down, and any attempt to open a court’s consideration to reliability, but then to restrict its deliberation there, will inevitable appear arbitrary and unreasonable on the instant facts.

Similarly, however, we also consider that the Court of Appeal acted reasonably in allowing the appeal in question. This is because, as the prosecution
averred in their contention to the higher court, the trial judge had confused the question of admissibility of expert evidence with the question of the weight of that evidence. We agree: the matters brought into question with regard to admissibility were properly the province of the trier of fact. Indeed, due process under the principles of our adversarial system demands as much as a minimum requirement. We acknowledge that our support of both courts is contradictory, but there is no paradox because the contradiction is entirely explicable as the failing of the supposed reliability test in question. Such contradictions are merely the predictable result of the imposition of a separate reliability test for admissibility in an adversarial system that requires evidentiary weight to be assessed by the trier of fact. Such a test is impossible for courts effectively to apply, and leaves trial judges’ best implementation of it inevitably hostage to successful appeal. Such a policy is bad for trial judges, bad for appellate courts, bad for legal
certainty, bad for adversarial due process and unworkable in practice.

**Conclusion**

It will naturally (and rightly) be objected that our treatment of various issues in this paper has attended inadequately to many finer points regarding the criminal courts’ treatment of expert scientific opinion testimony. We have not attempted a comprehensive overview of the law, or even of the detail of the reform proposals on offer, nor have we engaged these issues from a particular perspective (e.g. of best practice for forensic scientists at trial). Such studies have, in any case, been produced elsewhere, including academic treatments of the Law Commission’s proposals themselves. These proposals have, in critical comment, been perceived as an important move or the opinion has been that they offer very little new
consideration, if any at all. Instead we have tried within the short space of this essay to prompt a reframing of the debate. Our argument has been delivered in two parts. In the first we made some critical comments about the accepted starting points for present proposals, attacking the premises and reasoning that have been cited in support of the present focus on reliability. In the second part we took a more pragmatic approach, arguing that the promotion of reliability in tests for admissibility of expert opinion evidence is unworkable in practice. It sets judges up for failure, and provides fertile ground for successful appeals against conviction without providing any determinate reason in law why such decisions should have gone one way rather than the

other.

The reframing we have in mind asks for the admissibility of expert scientific opinion testimony to be looked at in the round. As Edmond and Roach observe:

The Law Commission’s paper illustrates how a superficial understanding of Daubert tends to generate countervailing pressures to make exceptions for expert evidence based on experience, emerging technologies, and older techniques never shown to be reliable. The Law Commission’s proposal exemplifies the apparent reluctance (or inability) of many law reformers (and practicing judges and lawyers) to engage with critical non-legal literatures or contemplate change to traditional forms of practice in order to preserve fundamental legal principles underpinning the accusatorial
criminal trial.⁶⁹

In fact we think there needs to be attention to actual error rates for different types of evidence in determining policy, but also to possibilities that have often been dismissed out of hand, such as the use of existing common law principles of admissibility in the deliberation of the matters in question. The use of relevancy, sufficient weight and the requirement that probative value outweighs prejudicial effect, too breezily pushed aside in the Law Commission’s consultation paper,⁷⁰ might yet furnish appropriate tools to ensure due process, whilst possessing the obvious merit that these principles have evolved to cohere closely with the adversarial system of which

they are a part. Indeed, there is reason to believe that existing rules and principles of criminal evidence have been the only ones in use all along, at least in England and Wales, with courts applying a test of admissibility that, in the context of expert opinion evidence, requires that an assessment of reliability is made in its answer (viz. Reed and I, R & T, above). Indeed, much of the confusion in law, at least, has arisen precisely because of judicial uncertainty about how to incorporate a new common law test of reliability within this well-worn frame, rather than concerning reliability as simply a matter to be considered under the test of admissibility in such cases. We also consider that many of the perceived difficulties in handling expert scientific testimony could be answered if barristers were better at dealing with such testimony – which is not an unreasonable expectation for parties to have.