Was the Baby Shaken? Evidence, Expertise and Legal Epistemology in English Criminal Trials

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Introduction: Sources of Anxiety and Dispute

‘There are few types of case which arouse greater anxiety and controversy’, said Moses LJ, delivering the judgment of the Court of Appeal in the recent case of Henderson, ‘than those in which it is alleged that a baby has died as a result of being shaken’. Over 100 cases involving ‘shaken baby syndrome’ have been tried in the criminal courts of England and Wales during the last two decades. The case with the highest public profile is probably still Cannings, the successful appeal which precipitated an urgent official inquiry into 297 other convictions in which babies and infants had died suddenly in suspicious circumstances. In about one third of these cases parents or carers were found to have inflicted, often fatal, shaking injuries on babies and infants. Cannings has an assured place in the history of notorious British miscarriages of justice, alongside the roughly contemporaneous exoneration of Sally Clark, a case involving unexplained ‘cot death’ rather than alleged shaking.

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1 R v Henderson; R v Butler; R v Oyediran [2010] 2 Cr App R 24; [2010] EWCA Crim 1269.

There are several grounds on which these cases might be regarded as exceptional, especially if one’s comparative baseline is the daily round of burglaries, thefts, criminal damage, minor assaults, and small time drug-dealing which take up most of our criminal courts’ time. Homicide is statistically rare and exceptionally grave, and all the more piteous when the victim’s short-life had barely begun. Within this exceptional category of grave crimes, contested trials will generally revolve around two standard scenarios: either the victim was certainly murdered, but the accused denies being the murderer; or the accused admits causing the victim’s death – or can fairly straightforwardly be proved to have done so – but denies murder because the killing was justified (e.g. in self-defence), excusable (e.g. on grounds of necessity or insanity), or should more properly be characterised as a different, lesser crime (e.g. manslaughter; infanticide, etc.). Shaken baby cases are exceptional in this respect, also. For in this scenario, the fact-finder will often have to make a straight and dramatic choice between murder (or voluntary manslaughter) or natural death involving no crime at all. And if this choice were not hard enough as it stands, one should add that the accused is either a killer or an already distraught parent or carer, for whom a mistaken verdict of guilty would heap injustice on top of gut-wrenching tragedy. A third respect in which shaken baby cases are exceptional (though not unique) lies in the paucity of factual testimony available to the fact-finder. The victim is either dead or, as a pre-lingual infant, in any event incapable of explaining how the injuries came about. The injuries are typically alleged to have been sustained whilst the infant was in the sole care of the accused, normally at home or in another domestic setting precluding the possibility of independent eyewitnesses. Of course, in any contested case the accused will be denying any wrongdoing, but the authorities and the fact-finder are not at liberty simply to take the accused at his or her word. The one
adult witness to the alleged crime is the person with the strongest motive to lie if they are, in fact, guilty. Taken together, these three situational factors are more than enough to induce anxiety in criminal adjudication. As the Court of Appeal itself observed in *Henderson*, ‘[t]he controversy to which such cases gives rise should come as no surprise’.  

Case studies can be illuminating precisely because they provide a striking point of contrast with the more mundanely routine. Equally, cases studies can be valuable because they exemplify ‘garden variety’ typicality. In this paper I want to suggest that the Court of Appeal’s judgment in *Henderson* merits sustained attention and will repay close study on both grounds. For in addition to their plausible claims to exceptionality, shaken baby cases also exemplify many routine features of contested criminal trials. There is, by definition, a dispute about one or more key facts that the court must somehow resolve. In order to do so, courts deploy their standard array of institutional, normative and epistemological resources. For trials of serious criminal offences in England and Wales, this means adversarial party-driven process and fact-finding by lay juries, conducted within a framework of detailed procedural rules and principles (including rules governing the admissibility and permissible uses of evidence, and legal doctrines for managing epistemic deficits and risks, including evidentiary presumptions and burdens and standards of proof). With very few other available sources of information bearing on the issues in dispute, the testimony of expert witnesses inevitably becomes central in shaken baby trials, and this, too, is an increasingly prevalent feature of modern criminal litigation. One might just as easily say of prosecutions built around, e.g., DNA profiles, fingerprints, ballistics, CCTV surveillance footage, or any of the ‘trace’ forensic sciences, as the Court of Appeal

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3 R v Henderson [2010] 2 Cr App R 2, [1].
said of the shaken baby convictions under review in *Henderson*, that ‘[e]xperts, prosecuting authorities and juries must reconstruct as best they can what has happened’.⁴

Beyond the intrinsic importance of its subject matter, this paper’s dissection of the judgment in *Henderson* aims to elucidate prominent features of the distinctively ‘legal epistemology’⁵ of fact-finding in the service of criminal justice, at least as these epistemological practices are interpreted, institutionalised, and re-enacted in English criminal trials. As well as presenting a detailed case-study in the epistemic practices of legal adjudication with generic implications, I hope that the following discussion will also contribute to comparative legal scholarship by emphasising the importance of distinctive legal traditions, and their underlying rationales, for making sense of criminal trials in terms of their local institutional contexts and normative juridical frameworks.

1. Case Histories

Our first task, exemplifying William Twining’s evergreen argument for ‘taking facts seriously’ in Evidence teaching and scholarship,⁶ is to look more closely at the facts of the case. Indeed, the Court of Appeal’s judgment in *Henderson* was concerned with conjoined appeals from three separate trials, each of which in some respects

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⁴ Ibid.


exemplifies and in other respects contradicts my introduction’s thumbnail sketch of
the ‘typical’ shaken baby case.

In *Henderson* itself, the accused was a well-respected and experienced child-
minder. An 11-month old child collapsed in her care, and died two days later in
hospital. No less than twelve expert witnesses testified at Henderson’s trial, eleven in
support of the prosecution’s allegation that Henderson had either shaken the infant to
death, or else had hit the baby’s head against a soft surface during an episode of
shaking. Henderson vigorously resisted the allegation and denied harming the child in
any way. She called character witnesses to attest to her experience and reliability as a
childminder, and pointed to the fact that she had raised two sons of her own. The
prosecution’s case was built around the testimony of its medical experts, without
which this would have been an unexplained sudden infant death. After a lengthy six
week trial, Henderson was convicted of manslaughter by a 10-2 majority jury verdict.
Not without some misgivings, Henderson’s conviction was upheld on appeal.

The second of the three conjoined appeals, *R v Butler*, involved a father whose
seven-week old daughter, Ellie, was rushed into hospital. The baby showed no
external signs of trauma, but turned out to be suffering from serious internal head
injury. Suspicions were further aroused because Ellie had also suffered burns to her
forehead and arm, which were said to have occurred when she rolled off a pillow and
came into contact with a radiator. The doctors diagnosed classic non-accidental head
injury (NAHI), with a terminal prognosis. However, the ‘unusual feature of this case’\(^7\)
was that Ellie unexpectedly made a full recovery. Her father was nonetheless
prosecuted and convicted of causing grievous bodily harm\(^8\) and child cruelty,\(^9\) after a

\(^7\) [87].

\(^8\) Offences Against the Person Act 1861, s.20.
four week trial in which the prosecution called fifteen medical experts and the defence adduced three experts in rebuttal. The Court of Appeal subsequently allowed Butler’s appeal and quashed his 18 month gaol sentence. The Court feared that knowledge of Ellie’s previous injury had prejudiced the jury against the accused, when there was never any suggestion that the radiator burn had been inflicted deliberately. In retrospect, this incident should have been viewed as ‘new parent carelessness’10 of no concern to the criminal law.

In the third conjoined appeal, arising from *R v Oyediran*, the accused was convicted of murdering his 10-week-old son, Femi, who had suffered fatal brain damage. The prosecution’s case at trial, based on the testimony of five expert pathologists and paediatricians, was that Femi had sustained two head separate and cumulative head injuries, the first about two weeks before his death and the second two or three days before he died, both of which were ascribed to shaking or throwing or a combination of the two. Post-mortem Femi was also found to have an unusual and unexplained arm fracture, which had apparently occurred 2-4 weeks prior to his death. There was considerable background evidence of the accused’s volatile temper and hostility towards doctors and social workers. However, the accused steadfastly rejected any suggestion that he had deliberately harmed his son. He would have done anything, he said, to protect little Femi. He had not noticed any of the symptoms described by the prosecution’s experts and could not explain how Femi’s injuries had occurred. Femi’s mother, Sophia Rudder, whom the accused apparently dominated, had advanced multiple sclerosis. It was suggested at trial, and argued again on appeal, that Femi’s injuries may have been caused by his mother’s inability to pick him up

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9 Children and Young Persons Act 1933, s.1.
10 [88].
properly. Rudder stood trial alongside the accused, charged with causing or allowing the death of a child.\textsuperscript{11} She was acquitted, but succumbed to her own debilitating illness prior to the accused’s appeal. The Court of Appeal rejected Oyediran’s appeal and upheld his life sentence for murder imposed by the trial judge, with a recommendation that he serve a minimum term of thirteen years’ imprisonment.

The similarity of the factual issues raised in each trial, and the overlapping legal implications of the three applications to adduce further expert evidence on appeal, made it convenient to roll up all three appeals into a single judgment. As the Court of Appeal itself observed, ‘it would be unfortunate if different constitutions [of the Court] wrote different judgments on different occasions when the appeals were heard so closely together’.\textsuperscript{12} In fact, the three cases can be described as factually similar in a much more precise, technical sense. All three children suspected of being shaken were diagnosed with encephalopathy and subdural haemorrhage and two of them (not Femi Oyediran) also had retinal haemorrhages, a trio of symptoms known in the medical literature, and subsequently in forensic practice, as ‘the triad’. The triad was once believed by some experts to be conclusively diagnostic of NAHI and by others to be an artefact of some possibly non-suspicious, but as yet undetected, underlying pathology (‘the unified hypothesis’). It is now widely regarded as strongly indicative of NAHI without being conclusive. As we shall see, the Henderson judgment builds on the Court of Appeal’s previous pronouncements in \textit{Harris},\textsuperscript{13} another conjoined appeal, in which the probative value of the triad was first systematically reviewed by the English courts.

\textsuperscript{11} Domestic Violence, Crimes and Victims Act 2004.
\textsuperscript{12} [8].
\textsuperscript{13} \textit{R v Harris; R v Rock; R v Cherry; R v Faulder} [2006] 1 Cr App R 5, [2005] EWCA Crim 1980.
All human fact-finding is ‘contextual’ in the elementary sense that it occurs at particular times and in concrete places and spaces, and is performed by human beings with often impressive but certainly constrained cognitive abilities, and with particular motivations and objectives in mind. Legal fact-finding is special not because it is contextual, but because it occurs in special kinds of institutional contexts and is subject to very particular and highly evolved normative expectations. All modern legal systems regard themselves as striving to do justice rather than, say, conducting an ‘exhaustive search for cosmic understanding’.

But notions of what justice requires differ quite considerably from place to place, especially what it comes to designing appropriate institutions and procedures for conducting criminal adjudication. The first task in cultivating a better appreciation of legal decision-making in cases involving disputed scientific evidence, or for that matter any other kind of evidence, is to pay very close attention to the type of legal proceeding in question, its scope, objectives, jurisdictional powers and limitations, and characteristic cultural mores.

(a) Appellate Review of Criminal Convictions

Unlike criminal appeals in most of continental Europe, where retrial *de novo* is common practice, criminal appeals against conviction in England and Wales are constrained affairs. The Court of Appeal (Criminal Division) is basically confined to appellate review of the *legality* of a conviction rather than concerning itself with the

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type or quality of evidence on which the accused was convicted. Moreover, the Court routinely defers to exercises of judicial discretion by the trial judge on questions of trial management and procedure, so that even if minor procedural irregularities are acknowledged to have occurred it does not necessarily follow that the accused’s conviction will be found ‘unsafe’ and quashed. Generally speaking, ‘I am (factually) innocent’ is not a cognisable ground of appeal in England and Wales, unless the accused is able to back up this bare assertion with exculpatory ‘fresh evidence’ which has come to light since the original trial or, exceptionally, the Court of Appeal entertains a ‘lurking doubt’ about the safety of the conviction, even though it cannot pin its reservations on any particular procedural defect in the trial.

The reasons for this notably cramped approach to criminal appeals are partly to be found in considerations of efficiency and finality which concern all modern legal 15 The test for allowing appeals pursuant to section 2 of the Criminal Appeal Act 1968, as amended by the Criminal Appeal Act 1995. 16 Section 23 of the Criminal Appeal Act 1968 provides, in material part, that ‘the Court of Appeal may, if they think it necessary or expedient in the interests of justice… (c) receive any evidence which was not adduced in the proceedings from which the appeal lies’. Subsection 23(2) further states that: ‘The Court of Appeal shall, in considering whether to receive any evidence, have regard in particular to (a) whether the evidence appears to the Court to be capable of belief; (b) whether it appears to the Court that the evidence may afford any ground for allowing the appeal; (c) whether the evidence would have been admissible in the proceedings from which the appeal lies on an issue which is the subject of the appeal; and (d) whether there is a reasonable explanation for the failure to adduce the evidence in those proceedings’. 17 ‘[I]n cases of this kind the court must in the end ask itself a subjective question, whether we are content to let the matter stand as it is, or whether there is not some lurking doubt in our minds which makes us wonder whether an injustice has been done. This is a reaction which may not be based strictly on the evidence as such; it is a reaction which can be produced by the general feel of the case as the court experiences it’: R v Cooper [1969] 1 QB 267, 271, CA. Also see Stafford v DPP [1974] AC 878, HL; R v B (Brian S) [2003] 2 Cr App R 197; [2003] EWCA Crim 319, CA.
systems, but also more particularly in the pivotal role played by lay juries in criminal adjudication in the common law world. Despite their numerical decline in the totality of criminal proceedings and almost complete eradication from civil justice, lay juries remain a vital part of the administration of criminal justice in England and Wales in relation to serious offences tried on indictment in the Crown Court. In addition to their practical accomplishments (some aspects of which are further elucidated below), lay juries underwrite the legitimacy of criminal verdicts by ensuring that forensic fact-finding and the application of criminal law remain in touch with the values and expectations of ordinary men and women and answerable to their sense of justice. Whatever ‘trial by one’s peers’ might have meant to the noblemen who extracted the concessions enumerated in Magna Carta from King John in the thirteenth century, this is the democratic liberal sentiment that it has come to embody for British people today. The significance of these broader observations for present purposes is that an appeal against conviction heard by three senior judges sitting in the Court of Appeal is nothing like a first instance criminal trial before a judge and twelve lay jurors drawn at random from the general population, and cannot hope to replicate its practical or symbolic authority by substituting a ruling of the appellate tribunal for the jury’s original verdict. Appellate proceedings are consequently restricted to reviewing the legality and sustainability of the jury’s verdict, without seeking in any way to challenge, much less usurp, the jury’s unique procedural role and constitutional function. Even when an appeal against conviction succeeds, the case is likely to be referred back to the Crown Court for retrial before a jury, unless

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19 Or one senior and two less senior judges.
there are circumstantial reasons to conclude that a retrial would not serve the interests of justice in the instant case.\textsuperscript{20}

The Court of Appeal began its judgment in \textit{Henderson} by reiterating these foundational institutional constraints on the scope of the present appeals. ‘[T]rial by jury does not mean trial by jury in the first instance and trial by judges in the Court of Appeal in the second’, intoned Moses LJ, and this fundamental precept ‘applies no less to cases which depend upon expert evidence than to those which do not’.\textsuperscript{21}

Furthermore, the primacy of lay fact-finding in criminal trials combines with the adversarial structure of English criminal litigation to produce a second, more technical limitation on the scope of criminal appeals: no party may run an argument or adduce a piece of evidence which was readily available to it but was not advanced at trial for tactical reasons. This is a generic requirement, but it has special salience in relation to expert evidence, especially expert \textit{opinions}.

In the normal run of cases, both parties would be expected to lead their best case at trial. Adversarialism is justified in part precisely because it naturally generates positive incentives for each side to ‘win the case’ by producing the best evidence it can to persuade the fact-finder of the justice of its cause. Of course, it is entirely possible that salient new evidence will come to light only after the trial has already taken place, owing to oversight, incompetence, or impropriety, or simply because life

\textsuperscript{20} Criminal Appeal Act 1968, s.7.

\textsuperscript{21} [4], quoting Lord Bingham in \textit{R v Pendleton} [2002] 1 WLR 721, [2001] UKHL 66, [17]: ‘[T]he central role of the jury in a trial on indictment… is an important and greatly-prized feature of our constitution. Trial by jury does not mean trial by jury in the first instance and trial by judges of the Court of Appeal in the second. The Court of Appeal is entrusted with a power of review to guard against the possibility of injustice but it is a power to be exercised with caution, mindful that the Court of Appeal is not privy to the jury’s deliberations and must not intrude into territory which properly belongs to the jury’.
sometimes works that way and nobody is to blame. English law has developed various mechanisms for revisiting trial verdicts when genuinely new evidence comes to light post-trial, including, of course, criminal appeals against conviction. But the situation is materially different when the information in question was available all along, but the relevant party simply chose not to use it. The Crown is subject to extensive duties of pre-trial disclosure, encompassing not only the evidence it intends to adduce at trial but also ‘unused material’ that might help the defence. In keeping with the prosecutor’s dual role as a ‘minister of justice’, the Crown must also lead its entire case in-chief, without deliberately holding back information intended to trip up the accused in cross-examination. In the modern era of proactive judicial case management, the defence, too, is under duties of pre-trial disclosure. Although this represents a significant departure from ideal-typical models of adversarial criminal process, the prosecutor’s disclosure duties remain far more exacting than those now imposed on the accused, and the defence is not obliged to make any affirmative response at trial unless and until the prosecution has already established a *prima facie* case of guilt; by which time the accused should be well informed about the nature of the prosecution’s case and the evidential resources at its disposal for mounting any affirmative defence (which, at a minimum, could be the simple assertion that the prosecution’s evidence fails to prove the charged offence(s) to the criminal standard of proof).

Adopting a naively epistemological perspective, one might say that if pre-trial criminal procedure has operated in the way it should,\(^{22}\) so that the accused is properly informed regarding both the nature of the prosecution’s allegations *and* the evidence

\(^{22}\) Though the significance of this conditional in practice should not be underestimated. Defence lawyers regularly complain that prosecution disclosure is late or incomplete or both.
available to prove them, there is no legitimate room for tactical considerations to enter into defence trial strategy. If innocent, the accused need only tell the truth. If guilty, criminal procedure might well provide opportunities for the accused to equivocate and dissemble (not least by remaining silent), but he can hardly complain if his stratagems fail or backfire and he ends up being convicted: *ex hypothesi* that is exactly the trial outcome he deserves.

This is one of many significant respects in which naïve epistemology fails to appreciate the empirical realities of criminal litigation. Defence lawyers are routinely obliged to make tactical judgements, even in simple cases, and even where the accused is (factually) innocent. One of the most consequential tactical decisions is whether to call the accused to testify in his own defence. It is facile to say that an innocent accused will be acquitted if he tells the truth. Many accused make poor witnesses in their own cause: they may be inarticulate, forgetful, drug-addled, aggressive or argumentative. Some accused may come across as – and might indeed be – thoroughly unpleasant individuals who would immediately alienate the jury as soon as they opened their mouths. These are the kinds of considerations which lead defence lawyers not to call the accused as a witness in his own defence, even though they know full well that the jury might hold it against them, in line with the commonsense expectation that innocence would speak up for itself – and regardless of whether, as a matter of formal law, the judge is permitted to invite the jury to draw adverse inferences from the accused’s silence (as trial judges may do in England and Wales). Another kind of tactical decision involves choosing between multiple lines of defence or one simple counter-narrative. The psychologists’ notion that lay fact-finders process information in terms of holistic narrative ‘stories’ strongly resonates with the experience of many trial lawyers. With this in mind, it might be more
effective defence tactics to present a single, coherent, and uncluttered counter-narrative of innocence rather than trying to snipe at disparate strands of the prosecution’s case. A multipronged attack might be viewed by the jury as a rather desperate attempt to nit-pick in the absence of a strong and evidentially credible defence and always runs the risk that lay jurors will fail to grasp the nuance of the defence position or to relate particular challenges to the prosecution’s evidence with its overall burden of proving guilt beyond reasonable doubt. A third, related, tactical decision involves choosing whether or not to adduce particular items of evidence, which may well be relevant to the case as a whole, but need to be assessed in terms of whether they actually support the defence’s chosen narrative or provide sufficient evidential ‘value-added’ to justify the risk that adducing the evidence will confuse the issues, lead jurors up evidential blind-alleys, or otherwise blunt the force of the defence’s primary contentions.

English law regards these tactical decisions in a very different light from cases in which genuinely new evidence is discovered post-trial. The logic of adversarial procedure is that the accused is responsible for the tactical choices he makes – or which in most cases are made for him by his lawyers, one hopes in close consultation with their client – in the course of litigation. The defence is estopped from later disavowing these tactical choices just because the outcome of the trial did not go in their favour. You cannot stick and twist in blackjack, and you cannot run one defence at trial and then expect to be allowed to run another one on appeal on the basis that the first one didn’t succeed and you would like another go. Unless the accused received incompetent legal advice (an argument to which English courts are not especially receptive), he is expected to accept the consequences of his tactical choices. Whilst there is certainly room to worry that this austere approach might create injustice in
particular cases, I cannot see how the logic of adversarialism can be avoided at a systemic level. No legal system is going to allow the accused to demand that trials producing convictions must be re-run as many times as it takes for the accused to exhaust every conceivable alternative line of defence, or until he is acquitted in the meantime.

The particular twist that cases relying substantially on expert testimony give to these generic institutional features of adversarial criminal trials is that the practical potential for staging re-runs is far greater where expert witnesses are involved. If the prosecution is armed with an eyewitness who observed the entire event, or if defence counsel is lucky enough to be able to call upon a cast-iron alibi witness, it is usually impossible to obtain any replacements if, for whatever reason, these star witnesses fail to materialise or to perform as anticipated at trial. The parties run their best cases on the day, the chips fall where they may, and the outcome is final. With the possible exception of very small forensic specialisms, however, expert witnesses are an essentially fungible commodity, especially where the expert is offering a professional opinion rather than testifying in relation to some aspect of the current proceedings (as where, e.g., the expert is the A&E doctor who first examined the victim and recorded her injuries). In an adversarial system of party-instructed experts, expert evidence will be adduced in a criminal trial only where it supports the case of the party producing the evidence. The temptation to try to re-run the expert case on appeal is obvious in these circumstances. If the trial expert’s performance was disappointing, why not secure a better (i.e. more defence-friendly) expert to testify on appeal? Equally, for the reasons we have seen, the Court of Appeal must be astute to prohibit tactical re-runs. As the Court summarised in Henderson:
It would subvert the trial process if a defendant were to be generally free to
mount on appeal an expert case which, if sound, could and should have been
advanced before the jury… Trials should not be a ‘dry run’ for experts.
Hearings of appeals should not present an opportunity to call new experts in
the hope that they might do better than those whose evidence had previously
been rejected.\textsuperscript{23}

The Court of Appeal’s position is reinforced by the knowledge that in many cases the
defence will already have indulged in expert opinion-shopping in devising its original
trial strategy. This was indeed the position in \textit{Henderson}. Moreover, if the Court of
Appeal were to permit the defence to adduce expert evidence which was in its
possession – or could have been obtained – prior to trial, but was not adduced for
tactical reasons, this would operate perversely to the detriment of defendants who had
laid all their evidential cards on the table in the original trial:

[E]xpert reports were obtained for the trial by the defence in \textit{Henderson} and
the defence chose not to call those experts because, in part, they assisted the
prosecution. In such a case, an appellant should not be in any better position
than an appellant who had called evidence at trial.\textsuperscript{24}

Of course, defence lawyers are well aware of the institutional constraints on
tactical re-runs and are too sophisticated to try to argue for leave to appeal on the
hopeless ground that they intend to make a better first of it at the second attempt.
Instead, defence lawyers exploit the wording of section 23 of the Criminal Appeal Act
by attempting to argue that a second (or third, etc) expert opinion constitutes
‘evidence which was not adduced in the proceedings from which the appeal lies’, i.e.
fresh evidence. This is a promising strategy, inasmuch as (i) an expert from whom the
\footnotesize{\textsuperscript{23} [3].}
\footnotesize{\textsuperscript{24} Ibid.}
court has not previously heard in the proceedings does offer ‘new’ evidence in a literal, if trivial, sense – she is at least a fresh witness; and (ii) since any item of evidence can be individuated and re-described in infinitely various ways, it is always possible to contend that the expert’s evidence contains something substantively new by shifting the focus of the opinion, changing the wording of its conclusions (e.g. to express greater support for the defence’s contentions or greater scepticism about the prosecution’s evidence), or instructing experts from different disciplines or disciplinary sub-specialisms from those called at trial, almost invariably resulting in differences of methodology, data, focus or expression which can be presented as ‘fresh evidence’ potentially undermining the safety of the conviction. Again, the appellate court needs to be on its mettle to expose and repel such manoeuvres, since ‘the difficulty of applying s.23 in cases which depend entirely on expert evidence is more acute’. 25 On further examination, the Court of Appeal concluded that Henderson’s appeal presented no truly new evidence, though the Court nonetheless thought that it had been worth hearing from additional experts on appeal owing to the complexity of the issues and the controversy surrounding them:

The fresh evidence was, in substance, not fresh evidence at all. The witnesses were ‘fresh’, their evidence was not. It was evidence from experts in the same disciplines as those whose reports the defence had previously obtained but decided not to call. The appellant’s previous representatives had chosen not to call the expert evidence because it helped the prosecution. That was a choice within the bounds of reasonable decision. If they had called that evidence and the jury had convicted, they would, probably, not have been permitted to adduce further evidence from experts in the same disciplines. They should not

25 [4]
be in a better position because of a previous, sensible choice not to call the experts.  

The position in Oyediran was found to be more straightforward. Here, the accused was merely attempting to reventilate points previously canvassed at trial or to reheat arguments about the state of medical science that had already been considered, and rejected, in Harris. On appeal, the defence team sought to adduce new expert evidence addressing the possibility that Femi might have been accidently dropped and then caught by his mother, but the Court of Appeal regarded this as a substantial re-run of the argument previously made to the trial jury. Another defence expert, Dr Squier, speculated that Femi could have been suffering from HIV, but this possibility was quite comprehensively refuted by a pathologist specialising in paediatric HIV, who was originally consulted at Dr Squier’s own suggestion. Consequently, the Court of Appeal was unable to discern any truly fresh evidence in the defence case on appeal and none that could ‘afford any ground for allowing the appeal’.  

(b) Error of Law

The Court of Appeal can entirely sidestep difficult epistemological questions if the original trial is found to have been corrupted by material error of law. Here the focus is typically on what the judge said to the jury in giving ‘directions’ as part of the judge’s summing-up at the close of the case, prior to the jury’s retirement and secret deliberations on its verdict. It is important to know that trial judges in England and Wales sum up on the facts as well as the law. This includes summarising the evidence

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26 [81].
27 CAA 1968, s.23(2)(b).
presented in the trial and explaining its significance for the legal tests which the jury must apply in order to determine whether or not the accused is guilty of the offence(s) charged. Judicial summings-up should be tailored to the facts and circumstances of the instant case. This requirement entails that a summing-up in complex proceedings sometimes occupies several days of court time and may run to hundreds of pages of transcript. If the trial judge is found to have misdirected the jury either in relation to the applicable substantive criminal law, or regarding a major pillar of criminal procedure such as the burden and standard of proof, the conviction will almost certainly be regarded as unsafe and quashed on appeal. The Court of Appeal can intervene in this scenario without fear of trenching on the jury’s hallowed role as fact-finder, because the fatal defect lies in how the case was presented to the jury and not in any aspect of the jury’s own performance. The jury’s verdict of guilty is neither legitimate nor institutionally sustainable if it was procured on a false legal prospectus, by inviting the jury to deliberate on the basis of legally invalid assumptions. Quashing convictions in these circumstances implies no criticism of the jury’s institutional status or epistemological performance, and might indeed be regarded as serving to underpin jury fact-finding by disqualifying judicial conduct which might – unconsciously or otherwise – illegitimately skew the jury’s deliberations and verdict.

Appellate review focussing on judicial directions to the jury is characteristic of the common law’s preoccupation with ‘input control’ on the scope of jury deliberations, which in turn reflects the highly constrained scope for ‘output control’ of essentially black-box (unreasoned) general jury verdicts of ‘guilty’ or ‘not guilty’. This analysis is often, quite understandably, linked with the characteristically common law penchant for exclusionary rules of evidence, but it should not be overlooked that the same institutional mechanism underwrites procedural rules
regulating the trial judge’s summing-up and the scope of legally permissible inferences. These ‘forensic reasoning rules’ necessarily pertain to information that has already been adduced in the trial, most of which will be legally admissible evidence.\textsuperscript{28}

The appeals in \textit{Henderson} demonstrate, especially by drawing several instructive contrasts between \textit{Butler} and \textit{Oyediran}, the facility and latitude that appellate tribunals derive from focussing on errors of law when confronted with deep epistemological controversies.

Butler’s case presented something of an enigma in the general run of shaken baby incidents and their depressingly predictable fatal consequences, and this very exceptionality immediately called into question the safety of his conviction. Not only did Ellie Butler not die of the brain damage she suffered, she actually made a full and complete recovery. This did not necessarily mean that her father had not assaulted her. The prosecution was still prepared to go ahead with the case on the basis of a formidable array of expert opinions, and the jury was obviously persuaded beyond reasonable doubt that Butler had intentionally or recklessly\textsuperscript{29} inflicted his daughter’s injuries. But the defence was also able to adduce countervailing expert testimony from equally eminent medical sources to the effect that Ellie’s injuries could have occurred naturally or through entirely innocent activities like being taken for a ride in a baby buggy. The Court of Appeal confessed to finding this conflict of expert testimony daunting:

\textsuperscript{28} In some cases the fact-finder will be directed to ignore legally inadmissible evidence which has been adduced in the trial, or to use information only for certain legally permissible purposes and not for other, legally proscribed, purposes. The practical efficacy of such directions is notoriously dubious: . But it is possible that such rules serve broader normative or ideological purposes in addition to, or even irrespective of, their epistemic implications.

\textsuperscript{29} The mens rea for section 20 inflicting GBH is intention or subjective – i.e. advertent – recklessness: \textit{R v Savage; Parmenter; R v Cunningham}.
There were three specialist paediatric neuroradiologists who gave evidence but the essence of the dispute was between two of them: Dr Stoodley, called by the prosecution, and Dr Anslow, called by the defence. Both these witnesses are of considerable standing in their field of paediatric neuroradiology and both have considerable forensic experience both in the criminal and in the family jurisdictions. It was the unenviable task of this jury not only to adjudicate as between their views but to do so without any extraneous evidence to assist them…

Fortunately, the Court of Appeal was spared the jury’s unenviable task by the availability of errors of law which could be regarded, at least for the purposes of the present appeal, as dispositive.

Indeed, having been a hard case at trial Butler was actually an easy case on appeal, because the trial judge’s summing up was multiply defective. This is jurisprudentially significant because the Court of Appeal is often prepared to condone minor lapses of judicial expression and even isolated errors of law as harmless deviations from procedural due process, but will not extend the same indulgence to a series of mutually aggravating mistakes which can only be viewed, in the aggregate, as compromising the safety of the conviction. The trial judge’s principal error in Butler notably concerned his factual summary of the evidence relating to the triad, in particular the significance of the prosecution experts’ concession that it was very rare for any child whose retinal haemorrhages had been caused by violent shaking to make a full recovery, as Ellie had done. The trial judge’s summing up naturally referred to the expert testimony addressing the issue of retinal bleeding, but not in terms which

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[95]
made its true evidential significance sufficiently clear to the jury, according to the Court of Appeal:

The judge correctly noted that the jury would have to look at the evidence as a whole. He acknowledged that the ophthalmological evidence weakened the triad. He seemed to take the view that that weakening was offset by the evidence of subdural haemorrhage. This, in our view, was not correct. Recovery demonstrated that the retinal haemorrhages could not be relied upon as evidence of shaking. On the contrary they were evidence of an unknown cause.\textsuperscript{31}

Once the ophthalmological evidence was viewed in its proper light, it becomes unclear how the jury could have rationally discounted the possibility that Ellie’s injuries arose from an unknown cause:

\[\text{T}\\text{here must be a rational basis upon which the jury could conclude that collapse was not due to an unknown cause, and thus reach a conclusion which rejects the evidential weight to be placed on the unusual feature in this case, namely complete recovery.}\textsuperscript{32}\]

However, the Court of Appeal proceeded to allow Butler’s appeal, not on the basis of any contentious (and inherently unverifiable) speculations about the jury’s actual reasoning, but on the basis of the (demonstrably) defective way in which the judge put the case to the jury:

Nowhere in his ruling did the judge fully acknowledge the weight to be attached to the uncontradicted ophthalmological evidence. Nowhere did he

\textsuperscript{31}[106] – [107].

\textsuperscript{32}[107].
identify the basis upon which the jury could reject the possibility of an unknown cause.... The judge did not sufficiently direct the jury as to the importance of the ophthalmological evidence and its effect in undermining the triad as evidence of NAHI and as supporting an unknown cause. It was incumbent upon him to have done so. No proper direction was given to the jury that they must consider the possibility of an unknown cause, particularly in the light of the ophthalmological evidence, and should only convict if they reject it.33

By the prevailing standards of appellate review, the Court of Appeal’s analysis and criticism of the fine detail of the trial judge’s factual summaries must be regarded as relatively interventionist. Judicial summings-up are not expected to spell out and evaluate every material factual inference that a jury might potentially draw from the evidence presented in the trial. Jury trial is predicated on the assumption that lay jurors are already well-qualified experts in commonsense inferential reasoning. Granted, lay jurors may require more hands-on judicial assistance in analysing the inferential logic of complex expert evidence, especially where expert evidence is contested as it was in Butler. But even when these points have been properly conceded, the Court of Appeal’s insistence that the trial judge should have been much more explicit and directive about ‘the weight to be attached to the uncontradicted ophthalmological evidence’ as well as ‘the basis upon which the jury could reject the possibility of an unknown cause’34 remains somewhat surprising. The disputed evidence of retinal bleeding had been fully canvassed in the trial and the jury must surely have been mindful of the fact that Ellie had recovered. Indeed, if the Court of Appeal was so confident in its own conclusion that ‘there was no rational basis on which a jury, in the light of the ophthalmological evidence, could reject an unknown

33 [108], [113].
34 [108].
cause’; it is difficult to see how the trial judge could properly have left the case to the jury at all. In other words, this begins to look like a prosecution on the cusp of ‘no case to answer’.

The sting of this suggestion, implying that the Court of Appeal’s decision in Butler was considerably more controversial than the Court itself let on, is substantially drawn by the presence of additional ‘serious misdirections’ providing ‘cogent support for the conclusion [the Court] reached’. For one thing, ‘[t]he summing-up was also defective in its structure’.

The judge carefully and conscientiously recited long passages of the expert evidence to the jury. But he did not ‘direct’ the jury at all. He recited those passages in the chronological order in which the evidence was given. That was of little assistance to the jury. The jury required a careful direction as to the essential issues which they had to determine and a reminder of that evidence and only that evidence which went to those issues. It was necessary to deal with that evidence issue by issue.

Reciting boilerplate or recycling raw narrative summaries rather than contextualising the evidence and relating it to the applicable law is just about the cardinal sin in judicial summings-up. This was further compounded in Butler by the trial judge’s refusal to sever the section 20 count from the count of child cruelty relating to Ellie’s radiator burns. Judicial rulings on defence applications to sever the indictment are

35 [110].
36 [112]. The Court duly noted that the trial judge had not had the benefit, in formulating his summing up, of the Court’s subsequent ruling in R v Schmidt (2009) or the guidance afforded by the JSB’s revised Bench Book.
37 [114].
38 [114] – [115].
hardly ever reversed on appeal, as questions of joinder and severance are regarded as falling foursquare within the trial judge’s discretionary trial management jurisdiction. In this case, exceptionally, the Court of Appeal acted on its lingering ‘sense of unease’ and quashed Butler’s child cruelty conviction as well. The Court clearly thought that the jury had treated Ellie’s internal head injuries and the radiator burns as mutually corroborative and incriminating, when in fact the expert evidence indicated that Ellie’s brain damage was quite likely to have been caused by unknown natural causes whilst her contact with the radiator was probably an accident attributable to ‘new parent carelessness’. In this regard, it made no difference that the trial judge had issued a textbook warning to the jury to treat each count separately, because the radiator incident was ‘the only concrete example of any misdoing’ by the accused and ‘it was asking a great deal of the jury to ignore it when they were considering the head injury’. This is how cumulative doctrinal analysis, weaving together several discrete strands of criticism of the conduct of the trial, enabled the Court of Appeal to dodge the epistemological bullets in Butler, as the Court itself effectively acknowledged in the final paragraph of its judgment relating to this appeal:

We do not need to address the fresh pathological evidence sought to be adduced by the appellant. That evidence is highly contentious. We did not expressly consider the application to call fresh evidence nor do we express any other view about it.

The appeal in Oyediran also raised several points of law challenging the trial judge’s approach to the admissibility of evidence, but this time with the opposite

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39 [88].
40 [117].
41 [88].
42 [118].
result – despite the fact that the appellant had the better of some of the legal arguments. In addition to the defence application to adduce fresh expert evidence (which the Court of Appeal rejected, as we have already seen), objection was taken on appeal to two particular items of evidence adduced by the prosecution at trial. The first piece of evidence related to ‘an extremely unpleasant incident’ which occurred when the accused was visited at home by a housing association officer, who testified that as well as roughly handling his partner, the accused had pushed and verbally abused the witness herself, threatened her with a walking stick, and prevented her from leaving the flat until the accused’s partner had intervened and demanded that the hapless housing officer be allowed to go free. The housing officer testified that she had notified the police immediately and had made notes to the effect that the accused’s partner and his child were at risk of violence and in need of immediate Social Services’ protection. 

This evidence was adduced by the prosecution pursuant to section 101(1)(c) of the Criminal Justice Act 2003 (‘gateway (c)’) for the specific, and quite limited, purpose of demonstrating that the accused’s partner, who was then also his co-accused in the trial, was capable of acting autonomously and asserting herself against the accused’s domineering personality, and thus of having sufficient mental capacity to be held criminally responsible for causing or allowing Femi’s death. Defence counsel argued on appeal, quite plausibly, that this evidence should never have been admitted, since its slight probative value in relation to the case against Femi’s mother was out of all proportion to its unfair prejudice to the accused. Either the evidence was not truly ‘important explanatory evidence’ within the meaning of gateway (c), or if it was, it

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43 [164].

44 CJA 2003, s.102 further elucidates that
should anyway have been excluded under section 78 of PACE on general grounds of unfairness. The Court of Appeal, however, rejected these contentions and upheld the trial judge’s ruling:

We accept that the evidence had no relevance as to whether or not the appellant was violent towards his son… In our judgment, the decision to admit evidence demonstrating [his co-accused partner’s] capacity to react to the appellant’s behaviour was relevant to an important matter in issue between her and the prosecution. Since it was the only direct evidence it was within the bounds of reasonable conclusion for the judge to hold that no injustice would be caused to this appellant by admitting the evidence.\(^\text{45}\)

In other words, without necessarily giving the trial judge’s conclusion a ringing endorsement, the admissibility ruling was found to fall within the acceptable parameters of the trial judge’s discretion to determine points of evidence and procedure in the course of the trial. According to the Court of Appeal, ‘it must have been obvious to the jury that the incident concerning [the housing association officer] did not demonstrate any violence or aggression on the part of the appellant against his own son’; and now it was considered significant that the trial judge had dutifully directed the jury that ‘the incident had no relevance at all as to whether or not the appellant had a propensity to be violent’.\(^\text{46}\) These propositions seem dubious on their face, and difficult to square with the Court’s observation in Butler that it was too much to ask of a jury to keep two unrelated incidents separate in their minds, even where the trial judge had given an impeccable direction to that effect. A better rationale for upholding the trial judge’s admissibility ruling might be found in the Court of Appeal’s passing observation that ‘[t]here was a body of evidence as to

\(^{45}\) [167], [168].
\(^{46}\) [167].
aggressive and forceful behaviour by the appellant, particularly when confronted by those he would have regarded as being in an official position’. 47 Perhaps the evidence was admissible, possibly at common law, 48 and not open to objection on grounds of prejudice because it was not telling the jury anything they did not already know about Oyediran’s violent disposition.

A second ground of appeal concerned one of the most controversial forms of evidence routinely adduced in English criminal proceedings, an alleged gaol-cell confession. According to the man with whom the accused shared a cell whilst he was being held on remand at Wandsworth Prison, the accused confessed to killing his son by shaking him to death. This erstwhile cellmate said that the accused had admitted that he often got stressed and took it out on his son by holding him upside down by the ankles and shaking him violently back and forth, and that he had done this on the day of Femi’s death. There were many evidential difficulties with this alleged confession, over and above the inherent credibility problems that nearly always dog gaol-cell confessions. The witness had a bad record of serious offending; his statement contradicted basic known facts (e.g. he claimed that the accused had said that Femi was three or four years old); and he was apparently incapable of getting his story straight, including details about the timing of the accused’s supposed confession that could be flatly contradicted by independent evidence. By the end of the trial the witness’s credibility was in tatters and the prosecution effectively disowned him. Nonetheless, having rehearsed the litany of defects in the evidence, the trial judge

47 [167].
48 The Court of Appeal expressly reserves this point at [169], but evidence bearing on the capacity of a co-accused would normally be regarded as going directly to the issues in the case without having to rely on ‘background’ bad character.
directed the jury that they should give any credence to the alleged confession only if they were sure it was true.

On appeal it was argued that the alleged gaol-cell confession was no longer capable of belief and should have been withdrawn entirely from the jury’s consideration. The Court of Appeal more or less agreed with this contention, but did not think that there had been any collateral damage to the safety of the conviction:

Had we been hearing the trial, we would probably have directed the jury to disregard the evidence. It was so flawed as to be of little value. But the very fact that it was so obviously unreliable can only have assisted the appellant. It was admissible and we are unable to say that the judge erred in allowing the evidence to be given, in failing to give a stronger warning to the jury, or that the evidence renders the jury’s verdict unsafe.\footnote{[177].}

With respect, it is difficult to see how the unreliability of the confession could ‘only have assisted the appellant’, unless the jury were to conclude that the prosecution’s case was so thin that they had resorted to importuning convicted sex offenders to bear false witness. But the prosecution had presented a cogent circumstantial case against the accused in which the gaol-cell confession was only ever intended as incidental corroboration. Most likely, the jury either ignored the gaol-cell confession altogether (which is what the defence on appeal contended the trial judge should have instructed the jury to do) or else drew on it in a diffuse and non-specific kind of way to confirm their general impressions of the accused as a suspicious character with a nasty temper and a lot to explain. The Court of Appeal’s rather lame observation that the evidence ‘was admissible’ and sanguine conclusion about the safety of the accused’s conviction are acceptable only if one shares the Court’s evident confidence that the accused was
pretty obviously guilty. To spell it out, these rulings of law are sustainable (if they are sustainable) only on the basis of some fairly robust epistemological assumptions.

(c) Trial by Jury

If Butler demonstrates how the Court of Appeal can pre-empt difficult epistemological questions by treating errors of law as determinative of appeals against conviction, Oyediran illustrates the limits of any fastidiously doctrinal analysis by revealing how conclusions on points of law often, implicitly if not expressly, rest on conclusions of fact. Appellate courts’ somewhat elastic deference to the trial judge’s discretion in matters of criminal procedure and evidence can be seen, on closer analysis, to expand and contract to calibrate with the evidential strength of the prosecution’s case. The strength of the prosecution’s case is in turn a major factor in assessing the ‘safety’ of a conviction on appeal.

The flipside of the Court of Appeal’s preoccupation with the legal rectitude of criminal trial proceedings is that, ‘lurking doubts’ aside, the jury’s verdict will generally be upheld if the trial was conducted fairly and without legal error and there is no (genuinely) fresh evidence which the accused can adduce in support of his claims of innocence. As I have said, ‘actual (factual) innocence’ is not a cognisable ground of appeal in England and Wales, and this partly explains why some now notorious miscarriage of justice cases have had to make repeated trips to the Court of Appeal until new evidence or legal arguments capable of rendering the conviction unsafe could be identified to the satisfaction of the Court. This is undoubtedly very hard on those who are wrongly convicted but are unable to establish their innocence (except by rerunning their original trial), but I cannot think of any systematic way of significantly ameliorating the problem of legally impeccable wrongful convictions –
which arises from the very epistemic deficit which criminal trials are designed to address – at least not without imposing side effects at least as bad as the existing injustice of unappealable wrongful convictions.

_Henderson_ is a classic example of a case in which the Court of Appeal certainly harboured doubts about the accused’s guilt, but without sufficient intensity to impel the Court to substitute its own assessment of the evidence for the trial jury’s verdict by invoking its residual, protean, ‘lurking doubt’ jurisdiction. The result, even where ‘unsolved mysteries’ linger, is that the verdict of the jury must stand:

[T]here remains the unsolved mystery of how so admired a childminder as this appellant should have been responsible for the use of excessive force, even momentarily, when handling this baby. But that was a problem with which the jury had to grapple. There is no basis upon which this court can say that the jury was not entitled… to conclude that the expert evidence proved, beyond a reasonable doubt, that the defendant had shaken Maeve with excessive force.\(^{50}\)

One way of beginning to rationalise the apparent austerity, or even callousness, of this conclusion is to remember that the concerns of a possibly wrongly convicted appellant are by no means the only important interests at stake in assessing the safety of a criminal conviction. The Court of Appeal in _Henderson_ was acutely mindful of the interests of the deceased child and of her grieving parents (not to mention the wider public interest in bringing child killers to justice, including those who kill without malice):

We remain concerned as to how the appellant finds herself in the unenviable position of seeking to establish that the jury’s verdict was unsafe, having served the severe sentence of three years. But our sympathies for everyone

\(^{50}\) [74].
concerned, Maeve’s parents and the appellant, cannot subvert our function. We cannot substitute, for the jury’s verdict, a conclusion based upon perplexity as to how this appellant could have treated Maeve with unlawful force, even momentarily. That was an issue which the jury resolved.\footnote{\[80\].}

In epistemic terms, the Court’s decision to dismiss Henderson’s appeal was underpinned by some commonplace generalisations about human behaviour. We know that good people sometimes do bad things – they act ‘out of character’, as we telling say – and, more to the present point, we know specifically that even loving parents sometimes harm their children through a moment’s loss of self-control caused by fatigue, frustration, fleeting feelings of inadequacy or inability to cope – all perfectly normal reactions to the physical and psychological demands of caring for a newborn baby. Babies and infants are fragile, and obviously entirely helpless and incapable of defending themselves from attack. Another piece of commonsense wisdom applicable to the current scenario is that history is never completely predictive of future events: there is, as we say, ‘a first time for everything’. Putting all this together in relation to the present appeal, the fact that Henderson was an experienced and well-respected child-minder with children of her own certainly made it rather unlikely that she would suddenly snap and violently shake and fatally injure a small child in her care, but it did not rule out the possibility that, just this once, she did just that, with tragic consequences. And babies’ constant crying (like children’s behaviour in general) can be exceedingly provocative.\footnote{\[80\].} In the absence of relevant

\[80\]. A common parental expostulation from the social milieu of my childhood was, ‘I’ll swing for you!’ – meaning that a mother or father driven to their wits’ end would kill their child and be hanged for it. The fact that the death penalty had recently been abolished in England and Wales did nothing to change the meaning or impair the effectiveness of this plea for better behaviour.
generalisations about human behaviour and family life, the jury’s verdict of guilty (of manslaughter) would have been unintelligible, presumptively irrational and unsustainable on appeal. But we can safely infer that the Court of Appeal was not only itself cognisant of these salient generalisations, but would also have proceeded on the assumption that the jury acted on them in arriving at its verdict – as it almost did, if only subconsciously. The Court of Appeal was satisfied, in other words, that something that certainly could have happened (applying the Court’s own logic of commonsense generalisations and factual inference) did happen, as determined by the jury’s deliberative verdict (presumptively applying the very same logic of commonsense generalisations and factual inference). Since English criminal procedure allocates responsibility for fact-finding to the jury rather than to any professional judge or tribunal, the Court of Appeal has no institutional (or epistemic) authority to substitute its own inferential conclusions for any ‘issue which the jury resolved’.

Moreover, the possibility of allowing the appeal on grounds of legal error, which proved so obliging in Butler, was closed off in Henderson. For one thing, the trial judge’s summing-up in Henderson had not committed the cardinal sin of spouting uncontextualised boilerplate to the jury:

They were ‘directions’, not an unstructured journey through the expert evidence. He made clear to the jury the issues which they had to decide and the rival bases on which they could reject or accept the evidence. The route the jury took to conviction is quite plain, on reading the summing-up.53

More intriguingly for present purposes, the Court of Appeal was particularly impressed by the way in which the trial judge had dealt with the possibility that there

53 [76].
could be some unknown cause of death which had not been advanced by either party in these proceedings:

[T]he judge directed the jury as to the need to bear in mind that medical science in relation to non-accidental head injury is developing, and as the defence would have it, uncertain, and that it may not be possible to identify the cause of death. He gave a positive and correct direction that the jury had to consider whether the death may be unexplained. He directed them that they had to be sure that unexplained death could be excluded.  

Notice that this last formulation sounds awkward in idiomatic English, but is legally precise. The jury must be ‘sure that unexplained death could be excluded’ because it is the prosecution’s duty, in accordance with the presumption of innocence, to disprove the possibility of unexplained causes to the criminal standard. Thus, the trial judge rightly ‘stressed that the defence was under no obligation to advance any particular theory as to cause of death’.  

Conversely, since the defence did not rest on any affirmative theory of unexplained cause of death but rather amounted to a blanket denial contesting the prosecution’s proof of fatal shaking, the jury was properly directed that ‘rejection of the theory of spontaneous seizure did not of itself mean that the jury was required to accept the prosecution case and convict’.  

Thus, the trial judge in Henderson could not be faulted, either, for his factual analysis of the evidence presented to the jury (the somewhat attenuated basis on which the summing-up in Butler also attracted criticism on appeal):

54 [77].
55 [78].
56 Ibid.
Accordingly, this is a case where the issue of unexplained cause in an area of developing medical science was properly laid before the jury. The justification for rejection of that possibility and for acceptance of the prosecution case is plain from the summing-up.\(^5^7\)

It will not be possible to make any firm judgements about the soundness of the Court of Appeal’s analysis and conclusion until we have looked more closely, in Section 3 below, at the epistemic credentials of the scientific evidence actually led in *Henderson* (and in *Butler* and *Oyediran*), and canvassed the merits of the institutional techniques and resources utilised by English courts to evaluate contested expert evidence in criminal trials. Before turning to that thoroughly epistemological task, the Court of Appeal’s judgment in *Henderson* supplies one final piece of the institutional architecture regulating criminal appeals in England and Wales.

**(d) Precedent, Law and Fact**

Legal systems in the common law family embrace the doctrine of *stare decisis*, which means – roughly speaking – that judges make binding law through decided ‘precedent’ cases. In general, only the pronouncements of senior judges in appellate courts are treated as precedents. The UK Supreme Court is now the ultimate judicial authority in matters of English criminal law, and its decisions are binding on all other judicial tribunals in England and Wales. The Court of Appeal is bound by judgments of the UK Supreme Court, and Court of Appeal judgments are in turn binding on first instance criminal courts, and also – at least notionally – on the Court of Appeal itself.

In contrast to many other common law jurisdictions, notably the USA, English judges have no legal authority to undertake substantive review of primary legislation created by valid Acts of Parliament. Again at least notionally, the Queen in Parliament is

\(^{57}\) [79].
regarded in English law as an unlimited and unfettered legislator in the Diceyan sense, although this formal picture today requires considerable adjustment to take account of the UK’s membership in the EU and its commitment to human rights principles in domestic and international law (not to mention the prevailing realities of economic power and global international relations). The salient point for present purposes is that precedent cases in English criminal law trump subordinate legislation and ‘soft law’ sources but are themselves subordinate to primary legislation. Moreover, the balance has shifted decisively in recent years as criminal statutes have proliferated, in accordance with the general tendency of modern regulatory states to increase the quantity and intensity of legal (including penal) regulations. Modern English law precedents increasingly address disputed points of statutory interpretation rather than general common law principles.

Like all comparative law contrasts, it is important that this one should not be overdrawn. Trial judges in civilian jurisdictions also have regard to relevant ‘jurisprudence’ (i.e. case-law) of appellate tribunals, as one would expect: partly because this promotes fair outcomes (‘treat like cases alike’), partly because it is very inefficient constantly to keep reinventing the jurisprudential wheel, and partly because it is pointless (and inimical to one’s career prospects) to hand down decisions that are very likely to be overturned on appeal. So the extent to which courts in different jurisdictions are bound by what common lawyers call ‘precedent’ is really a question of degree and, I would add, variations in legal culture. This observation is especially

58 See in particular, Human Rights Act 1998, ss.2-3.
59 Prominently including membership of the Council of Europe and subscription to the European Convention on Human Rights.
60 It follows that significant contrasts might be drawn in this regard within as well as between the legal families comprising the comparative lawyer’s standard taxonomy.
apposite in relation to the English law of criminal evidence and procedure, which does not generate concrete precedents in quite the same way as substantive law typically does. Indeed, the Court of Appeal frequently goes out of its way to stress that it is not creating a legal precedent for criminal procedure, but rather demonstrating the application of general legal principles to the unique facts and circumstances of particular cases – matters which classically fall within the sphere of the trial judge’s discretionary judgment, which will not be disturbed on appeal, even if the Court of Appeal might have decided the issue differently according to its own lights, unless the trial judge’s decision exceeds the bounds of reasonableness. Different constitutions of the Court of Appeal have sometimes issued apparently contradictory directives, and even where there is a clear intention to resolve some pressing procedural question on which guidance has been sought it is not always easy to discern which parts of the Court’s judgment carry precedential authority or what the true scope and implications of the ruling are intended to be.

Expert evidence, especially when it incorporates novel or disputed scientific knowledge, projects additional layers of complexity onto this already rather uncertain legal backdrop. On the face of it, expert witnesses are witnesses of fact and opinion in relation to their field of expertise. They certainly do not testify on points of English law,\(^61\) so no question of precedent should arise. However, commentators have noted the tendency of some courts to treat past admissibility decisions as precedents authorising the admission of particular kinds of scientific or other expert evidence in subsequent cases. This ‘grandfathering’ approach to the admissibility of expert evidence has been exposed and criticised by Simon Cole and other US commentators,

\(^{61}\) Foreign law, however, is a question of fact in English legal proceedings, and consequently an appropriate topic for expert evidence:
who argue that a formalistic approach to admissibility fails to subject scientific evidence to proper standards of validity and reliability-testing. The fact that another court has previously admitted the evidence is no guarantor of its reliability if the first court also failed to satisfy itself that the evidence was based on sound scientific principles. At the same time, the fact that novel scientific theories and techniques have received legal recognition by being admitted as evidence in criminal trials may be viewed in society at large as investing novel science with a social credibility that it scarcely merits by any objective scientific criteria. In this way, the ‘co-production’ of scientific evidence in the absence of proper scientific validation may lead to miscarriages of justice attributable to superficially persuasive but unreliable evidence within the criminal justice process and all manner of concatenated social ills beyond it.

These general concerns bubble to the surface in Henderson and were clearly in the minds of the judges hearing the appeals, albeit that the Court of Appeal would not necessarily have conceptualised the issues in the previous paragraph’s overtly social-scientific terminology. Indeed, the diagnostic implications of ‘the triad’ can be regarded as presenting a classic instance of forensically contested novel science. The issue had already been litigated in Harris, where the Court of Appeal recounted the origins of the ‘unified hypothesis’ in a scientific paper, known as ‘Geddes III’, and its author’s subsequent clarification of the implications of this paper in testimony before the Court. The unified hypothesis postulated that the putative triad of symptoms might have a single causal origin – in which case the triad’s probative value in diagnosing deliberate shaking would be significantly diminished:

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When Geddes III was published it was, and still is, very controversial. It is not overstating the position to say that this paper generated a fierce debate in the medical profession, both nationally and internationally. In the course of the hearing of these appeals we have heard evidence from a number of very distinguished medical experts with a range of different specialities most of whom had in witness statements expressed views on one side or other of the debate. However, early on in the hearing it became apparent that substantial parts of the basis of the unified hypothesis could no longer stand. Dr Geddes, at the beginning of her cross-examination, accepted that the unified hypothesis was never advanced with a view to being proved in court. She said that it was meant to stimulate debate. Further, she accepted that the hypothesis might not be quite correct.\textsuperscript{63}

The Court of Appeal quoted the following revealing passage from Dr Geddes’ cross-examination, in which Crown counsel drew attention to the fact that defence lawyers had been regularly invoking her theory to undermine the credibility of prosecution expert evidence in (alleged) shaken baby cases:

Q. Dr Geddes, cases up and down the country are taking place where Geddes III is cited by the defence time and time again as the reason why the established theory is wrong.
A. That I am very sorry about. It is not fact; it is hypothesis but, as I have already said, so is the traditional explanation…. I would be very unhappy to think that cases were being thrown out on the basis that my theory was fact. We asked the editor if we could have ‘Hypothesis Paper’ put at the top and he did not, but we do use the word ‘hypothesis’ throughout.

This would appear to be a striking example of the legal-scientific ‘co-production’ of scientific evidence, with potentially pernicious effects on criminal litigation. Dr

\textsuperscript{63} Ibid. [58]
Geddes insists that she never intended her ‘hypothesis’ to be treated as established fact, and tried to flag up its provisional status in the title of the original publication (but was thwarted by the editor). The implication is that defence lawyers have taken her paper out of context and twisted its meaning. But equally, the unified hypothesis was not invented by lawyers. If it had not been developed by Dr Geddes and her colleagues and published in Geddes III it would not have been available for (mis)use by defence lawyers and their expert witnesses. Moreover, given that the burden of proof lies on the prosecution to the criminal standard, the defence is perfectly entitled to invoke scientifically plausible hypotheses consistent with the accused’s innocence in order to suggest that the prosecution has failed to discharge its heavy burden of proof to demonstrate, by admissible evidence, that the baby was shaken.

The unified hypothesis advanced in Geddes III was effectively discredited in Harris as a self-sufficient basis for acquittal. However, the Court of Appeal’s judgment in Harris did not revert to the opposite default assumption that the triad is unerringly diagnostic of shaking-induced NAHI. Observing that ‘there remains a body of medical opinion which does not accept that the triad is an infallible tool for diagnosis’, 64 the Court concluded:

Whilst a strong pointer to NAHI on its own we do not think it possible to find that it must automatically and necessarily lead to a diagnosis of NAHI. All the circumstances, including the clinical picture, must be taken into account.65

64 Ibid. [69].
65 Ibid. [70].
In its subsequent judgment in *Henderson*, the Court of Appeal was at pains not only to confirm that the probative value of the triad remains as stated in *Harris*, but also to reiterate the orthodox legal position that findings of fact cannot create legal precedents binding courts in subsequent cases:

>[I]t is trite to observe that the conclusion of any court as to the medical evidence, whether at first instance or on appeal, is dependent upon the evidence before that court. No appellate jurisprudence could provide authority for a medical proposition. The strength of a proposition in medicine depends upon the strength of the medical evidence on which it is based. The quality and extent of the evidence will inevitably vary from case to case. Whilst it is now commonly accepted that the triad is strong *prima facie* evidence of shaking, that depends upon the common acceptance of experts in the field and not upon the conclusion of courts which are only able to weigh the evidence presented before them. Previous legal authority cannot determine whether the conclusion of a medical report should be accepted or rejected. The most legal authority can do is present an accurate record of what was or was not accepted or propounded.  

This is a message with multiple intended audiences. Trial judges and lawyers are put on notice that admissibility determinations and judicial directions informing the jury’s inferential reasoning must not be predicated on the lazy assumption that a particular approach is necessarily warranted just because another court has adopted it in the past. Self-referential ‘grandfathering’, to borrow Cole’s terminology, must not be treated as a legitimate proxy for scientific validity or probative value.

However, the Court of Appeal’s reiteration of elementary legal principles was also quite self-consciously directed at medical expert witnesses: ‘We stress this problem because we feared that the medical profession may have looked to the courts...’

66 [6]
to resolve medical controversy’.\(^{67}\) The Court plainly wanted to scotch any strong notion of the ‘co-production’ of medical knowledge in this particular context. A focal-point for these concerns was provided by a report produced by the Royal College of Pathologists which sought to identify areas of consensus and disagreement between specialists on the controversial issue of head trauma in children. The authority of the Report was somewhat compromised by the fact that the draft text had not yet been agreed by all the contributors. But in any event, the Court of Appeal observed, the Report itself, whatever its status for medical professional, was not directly in evidence in the current proceedings, and there could be no question of a court of law intervening in the substance of scientific disputes between medical experts:

[\textit{W}hilst the report had been circulated for amendment, positive confirmation of its content was not received by the President [of the Royal College of Pathologists] from all the participants. We have not been able to deploy that report save insofar as it was adopted in evidence before us. We should say, however, that, in the evidence before us in these appeals, no expert sought to undermine the proposition that the triad was, as described in \textit{Harris}, ‘a strong pointer to non-accidental head injury’…. [\textit{W}e must emphasise that this judgment constitutes legal, not medical, authority and neither adds to nor subtracts from the strength of the evidence afforded by the triad.}\(^{68}\)

Perhaps it is not surprising that pathologists and other doctors and forensic scientists, especially those familiar with the idea (if not the terminology) of ‘co-production’, might harbour misconceptions about the role of courts in settling scientific disputes which have arisen in legal proceedings. Lawyers and scientists are notoriously ill-informed about each others’ theoretical frameworks, institutional

\(^{67}\) [7].

\(^{68}\) [7].
practices, methodological principles, cultural assumptions, and professional norms and standards. But I am inclined to think that there is rather more to it than disciplinary tunnel vision. There is a subtle, but important, distinction to be drawn between: (i) the inferential conclusions warranted by common sense fact-finding; and (ii) the question whether those conclusions provide sufficient epistemic warrant for a criminal conviction. The former is – in law – a question of fact, pure and simple.\footnote{I fully recognise that the concept of facts ‘pure and simple’ will raise a smile with hard-core epistemologists. To reiterate: this language game is self-consciously and distinctively legal-institutional.} The latter is a question of whether particular inferences are sufficient to meet a legal standard, and this is conceptualised in (common law) legal theory as a question of law. Thus, the Court of Appeal is able to say that, as scientific knowledge currently stands (as the Court understands it, based on the evidence adduced in the instant case), the triad is weighty but not conclusive proof of non-accidental shaking; and the unified hypothesis is incapable, on its own, of establishing reasonable doubt. But the Court of Appeal does not say, and cannot consistently with the foundational epistemological premisses of admissible expert evidence say, that it is making any contribution whatsoever to resolving underlying scientific disputes. Consequently, it is always open to the prosecution or the defence to reopen any scientific controversy that has already been aired in court, no matter how recently or frequently, on the basis that scientific knowledge has advanced in the meantime and the court needs to reconsider the issue afresh. Indeed, English criminal adjudication is so wedded to the fundamental principle that factual issues must be determined by the jury’s unfettered deliberations on the evidence in the trial that criminal courts are not even bound by any previous jury verdicts, of guilty or not guilty, bearing on the factual issues in the
current proceedings.\textsuperscript{70} Conversely, unless the court is appraised of any material changes in the underlying scientific or technological knowledge-base, it is entitled to proceed on the assumption, as a matter of legal precedent, that if the Court of Appeal has said that a particular type of scientific evidence is sufficiently reliable to be admissible in criminal proceedings or, once admitted, is capable of supporting specified inferences, it remains so until further notice.

The conceptual distinction between questions of scientific fact, which lie within the province of expert witnesses, and questions of law concerned with assessing the level of proof necessary to satisfy normative legal standards (of admissibility; of inferential logic; of evidential sufficiency), which are determined by legislation or legal precedent is, I believe, both doctrinally sound and analytically illuminating. But it is right to add that the distinction \textit{in law} between ‘questions of fact’ and ‘questions of law’ is notoriously slippery in practice, and doubtless especially elusive in relation to scientific and other expert evidence, where complexities tend to be mutually aggravating. Legal theory comes prepared with its own all-purpose fudge: ‘mixed questions of law and fact’! The Law Commission of England and Wales recently (if inadvertently) illustrated the scope for confusion by arguing in its consultation paper on expert evidence that trial judges might take ‘judicial notice’ of previous courts’ admissibility determinations. This was a blatant misapplication of a legal doctrine that is properly applied only to factual propositions – and \textit{indisputable} facts at that\textsuperscript{71} – which the Commission sensibly disavowed in its subsequent Report, where it correctly characterises admissibility determinations with precedential value as rulings of law. But if the Law Commission was capable of

\textsuperscript{70} i.e. there is no issue-estoppel in English criminal proceedings.

\textsuperscript{71} See Roberts and Zuckerman, \textit{Criminal Evidence}, §4.7.
falling into this elementary conceptual confusion we should not be surprised to find frontline legal practitioners, let alone expert witnesses with little if any formal legal education, perpetrating similar, or worse, jurisprudential solecisms – the potential social fallout from which will not necessarily be restricted to the confines of legal proceedings.

3. Enduring Epistemic Challenges – Science, Experts and Forensic Proof

The previous section employed the Court of Appeal’s judgment in *Henderson* as a foil for developing a reasonably detailed sketch of the institutional context of criminal adjudication in England and Wales, with particular reference to prosecutions relying substantially on expert medical testimony that a baby was shaken. The peculiarities of legal fact-finding can only be appreciated, I suggested, by paying close attention to the particular institutional context of legal proceedings – not merely ‘legal’ fact-finding *in general*, but criminal adjudication in a particular legal system characterised by its own distinctive set of procedural traditions, institutional practices, normative ideals, professional cultures, and social expectations.

Against these richly textured institutional backdrops, each legal system improvises its own procedural mechanisms for utilising expert evidence. Prominent features of the institutional architecture of English criminal adjudication were explored in the previous section, including: (1) the Court of Appeal’s limited jurisdiction in criminal appeals, arising in part from; (2) deference to lay jury fact-finding, reinforced by; (3) the adversarial logic disqualifying the consequences of the accused’s own strategic choices from providing any valid ground of appeal. More specifically, the Court of Appeal has jurisdiction where; (4) there is ‘fresh evidence’ (an inherently malleable concept) or; (5) the conviction is rendered unsafe by
identifiable errors of law (which is also something of a moveable feast, especially when the Court is prepared to delve into the details of the trial judge’s analysis of the facts in summing-up to the jury). Where there is fresh evidence or legal error the Court of Appeal can intervene without fear of being seen to usurp the jury’s hallowed fact-finding function. Conversely, (6) where there is neither fresh evidence nor any discernible error of law, the jury’s verdict must generally stand, even if the Court of Appeal harbours certain misgivings about the conviction. The one thing that can be said with some confidence about the Court of Appeal’s enigmatic ‘lurking doubt’ residual jurisdiction is that the credibility of the entire appellate structure hinges on the expectation that the Court will play this joker only once in a blue moon in order to meet the exigencies of truly exceptional cases.

In one sense, this institutional structure supplies English law’s answer to the challenges potentially generated by expert evidence in criminal adjudication. At its heart is a carefully managed division of labour, between the judge and the jury during the trial; and then between jury fact-finding and appellate review in any subsequent appeal against conviction. In another important sense, however, one might object that these institutional structures enable English law to avoid grappling with the epistemological challenges posed by expert evidence. For there is minimal judicial scrutiny of the validity of expert evidence as a precondition of its admissibility, the jury is effectively a black-box decision-maker, and then the Court of Appeal falls over itself not to trespass on the jury’s fact-finding province. We can see both sides of the coin in the Court of Appeal’s evident willingness to jump in with both feet in Butler (but not Oyediran) on grounds of legal error as contrasted with its clay-footed immobility, despite lingering doubts, in Henderson.
These criticisms have some merit. My answer, at best partial and incomplete, has two strands. First, this is what legal tradition dictates in England and Wales, and I know of no alternative procedural arrangement which would be both normatively superior and socially acceptable in England and Wales. (These are not separate desiderata of criminal adjudication: they are fused together in the notion of the legitimacy of criminal verdicts, which has both normative political morality and sociological components.) The second strand of my response is to explore further the epistemological credentials of jury decision-making. Whilst this always involves a generous dollop of speculation in relation to unreasoned jury verdicts, the Court of Appeal’s judgment in *Henderson* ought to provide ample encouragement for those prepared to peer into the black-box and try to recreate the logic of the jury’s inferential reasoning.

(a) Medical Evidence in Forensic Context

We have already seen that the Court of Appeal itself purports to take this speculative task seriously. The key criterion when assessing the adequacy of the trial judge’s summing up in relation to the facts of the case, and the evidence adduced to prove them, is that there must be a demonstrable ‘rational basis’ for any inferential conclusion leading to a conviction. This is a test of evidential sufficiency, and somewhat parallels the jurisdiction of the trial judge (itself subject to appeal) to rule on defence submissions of ‘no case to answer’.

The Court of Appeal is generally reluctant to second-guess the trial judge on any ruling of fact (e.g. in making admissibility determinations on the voir dire), because the judge has the advantage of having heard the testimony of any relevant witnesses, as well as the parties’ contemporaneous submissions, and is credited with a
‘feel’ for the trial that the Court of Appeal cannot derive from a predominantly paper-based review on appeal. However, expert evidence is atypical in this regard as well. Where a case turns substantially on a conflict of expert evidence, more especially expert opinion evidence, there is no practical obstacle to the dispute being (re)litigated directly before the Court of Appeal, with the parties calling their expert witnesses to testify or adducing their experts’ reports and cross-examining their opponents’ experts in the normal way. In fact, it is quite conceivable that the Court of Appeal might be better placed to resolve such issues than the original trial court, not least because the parties might be better prepared to argue the case on appeal, when it is already known that a point of general importance has arisen with broader implications for future proceedings. The Court of Appeal in *Henderson* made a point of congratulating appellate counsel for being so well-prepared, thereby greatly facilitating the task of the court in resolving complex scientific disputes:

A core literature file, prepared by [counsel], enabled the court to find and weigh the underlying literature upon which controversial evidence was based. The Vice-President, Hughes LJ, conducted a detailed case management hearing providing timetables and giving directions as to how the evidence was to be prepared. Importantly, meetings were held between the experts so as to identify clearly those issues upon which agreement had been reached and those issues which remained a matter of debate. Without such preparation and obedience to the directions given by the Vice-President it would have been difficult properly to resolve the appeal. The example of the preparation in that case should, we suggest, be followed in future appeals.  

The Court of Appeal is equally keen, it should be said, on thorough and cooperative pre-trial preparation for first instance trials, in accordance with the Criminal

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72 [5].
Procedure Rules – though one might wonder whether that is always a practical proposition in every case employing expert evidence, including less serious cases in which it is not so obvious from the outset, as it would have been in Henderson, Butler and Oyediran, that conflicts of expert testimony would be central to the trial.

It was observed in Harris, as we have seen, that the triad was then regarded by prevailing medical opinion as strongly, but not conclusively, probative of shaking-induced NAHI. It was also held, as a matter of law, that the Geddes III unified hypothesis, taken in isolation, is incapable of generating reasonable doubt. An obvious question would appear to be: is the triad itself sufficient evidence on which to base a criminal conviction? Let us call evidence of the triad ‘simple medical proof’. I will argue in this section that the sufficiency of simple medical proof is never the right question to ask in shaken baby cases; or at least, it is a clumsy way of framing the question which is quite likely to mislead or generate avoidable confusion.

The Court of Appeal in Henderson was very explicit that the issue of simple medical proof did not arise in any of the three appeals currently before it. The Court declared at the outset:

[W]e should emphasise that none of these three cases is concerned solely with the triad: in Henderson the issue was whether there was evidence of injury independent of and additional to the triad, in Butler one of the issues was whether the unusual fact of the baby’s recovery after the discovery of retinal haemorrhage indicated a cause other than shaking, and in Oyediran the prosecution alleged a distinct and separate injury, namely, fracture of the baby’s arm.\(^7\)

\(^7\)[7].
Thereafter, the Court of Appeal felt the need to keep reinforcing this elementary point in relation to the individual appeals. So in relation to *Henderson* we are told again:

This is not a case, we emphasise, on which the prosecution relied merely on the triad. This case is concerned with whether the triad and what the prosecution describe as two additional features were and remain sufficient to prove the appellant’s guilt.\(^{74}\)

The additional features relied on by the prosecution in Henderson’s case were expert evidence of additional unexplained injuries and a challenge to the accused’s credibility in relation to a previous incident. The obvious problem for the prosecution’s deliberate shaking theory in *Butler* was that Ellie had been diagnosed with the triad, and yet had confounded medical expectations and made a full recovery:

That recovery cast doubt on a severe shaking injury; indeed it told against a major shaking incident. The ophthalmologists would not exclude any shaking or other trauma… There was no account of which they knew which explained the symptoms. Professor Taylor recognised that this was an unusual case, for the retinal haemorrhages were more consistent with raised venous pressure than shearing. In his view the chances were even between NAHI and unknown causes. It will be readily apparent that this evidence does not sit comfortably with a suggested causation of shaking though it does not exclude it. It weakens the structure of the prosecution case.\(^{75}\)

Finally, Femi Oyediran had manifested only two of the diagnostic triad in any event, so this could not be a case of simple medical proof. However, as we have seen, there was considerable bad character and other circumstantial evidence suggesting that he had been deliberately maltreated, including evidence of injuries which apparently

\(^{74}\) [25].

\(^{75}\) [92] – [93].
contradicted the accused’s account of events. The Court of Appeal suggested that this evidence ought to be viewed as highly incriminating, whether or not it could be established that the injuries had been inflicted on separate occasions or may have been suffered during a single, temporally-continuous assault:

Of course, if the prosecution could establish three separate occasions of deliberate injury caused to the baby, that would be powerful evidence of murderous intent. However, we reject the submission that if the evidence fell short of establishing three separate occasions when deliberate injury was caused, that undermines the safety of the verdict. The combination of the severity of the injury to the brain and the fracture to the arm, even if they were caused on the same occasion, not only establishes that the perpetrator was not the disabled mother, but rather that it was this appellant. The nature and severity of the injury, particularly to the left arm, is a sufficient basis to establish a murderous intent. That evidence is further supported by the absence of any reaction, let alone any report, of the condition of his son by this appellant when faced with the cries of pain of his son and the apparent effect, which we have described, of the first injury to the baby’s head.76

So far, this merely shows that the question of simple medical proof did not arise in the instant appeals. But I want to say that this question is never apt or helpful. The reason is that medical or scientific proof, of the triad or of any other material fact, is never truly the only evidence in criminal proceedings. One could only think otherwise by viewing the evidence in abstraction, beyond the practical institutional context of criminal adjudication. Of the many salient things that a jury invariably knows in criminal trial proceedings, consider these two ubiquitous suppositions: (i) the police and the prosecution think that the accused is guilty, and that they have the evidence to prove it; and (ii) the accused denies the charge, and will either speak

76 [197] – [198].
directly to his own innocence in the witness-box or else enter a blanket denial and put
the prosecution to proof. So in addition to any scientific evidence adduced by the
prosecution, the jury will also have before it, at a minimum, the accused’s testimony
or its absence (from which factual inferences may be drawn, whether or not legally
authorised in the relevant jurisdiction); and whatever suggestions defence counsel
has been able to put to prosecution witnesses in cross-examination, alongside any
concessions they might have made to counsel’s probing questions.

The fact that the prosecution’s scientific evidence, even if uncontradicted by
an opposing expert, is always pitted directly or implicitly against the accused’s
credibility was a feature of the appeals in *Henderson* on which the Court of Appeal
fleetingly remarked:

> The evidence to prove guilt may consist only of expert evidence. It must never
be forgotten that that expert evidence is relied upon to prove that the
individual defendant is lying in the account he gives, either at the time or at
trial.\(^7^7\)

In fact, this is a perfectly general epistemic feature of criminal litigation involving
scientific evidence. One might equally think of an accused responding to an
apparently incriminating DNA profile with a seemingly cast-iron alibi witness, or an
alleged burglar identified from clothing fibres and an earprint on the window broken
to gain entry to the burgled property who claims to have a long-term disability making
him physically incapable of committing the offence in the manner alleged. These
cases really do happen. Scientific evidence never proves the prosecution’s case in its

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\(^7^7\) In addition to which, the jury will have been observing the demeanour of the accused in the
dock throughout the trial. This is not ‘evidence’ in the technical lawyers’ sense, but it most
certainly is additional information on which the jury might choose to place some reliance.

\(^7^8\) [2].
entirety, and is never truly conclusive even in relation to those matters which it is logically capable of proving. (This is merely to restate the truism that judicial evidence is inherently probabilistic.) Proper regard for the forensic realities of proof in criminal adjudication should be sufficient to refute any fallacious notion of simple medical proof. Its rejection simultaneously reinforces the juridical – in England and Wales, the constitutional – importance of ensuring that the jury always has the final word on any disputed question of fact, even in relation to matters on which the jury has heard uncontradicted expert evidence.

(b) Scientific Uncertainty and Disagreement between Experts

Scientific uncertainty is often thought to pose acute difficulties for the legal system in relation to its reception of expert evidence. There is a general and a more specific strand to this contention. On a fairly standard-issue neo-Popperian philosophy of scientific investigation, science never actually proves anything. It merely tests theoretical hypotheses through experimental methods until a particular hypothesis is regarded as sufficiently warranted by its ability to withstand good faith attempts at falsification to qualify as scientific knowledge. Science, on this view, is inherently uncertain and inveterately open to further refinement and revision, and occasionally even to revolutionary rethinking, in the light of further scientific discoveries. This trademark general characteristic of science is said to be inimical to legal fact-finding, which seeks clear, unequivocal and reasonably certain answers to contested issues of fact in order to underwrite the enduring finality of criminal verdicts. The more specific strand of this contention suggests that scientific uncertainty poses particular difficulties for legal adjudication in relation to novel areas of science or innovative technological applications, or where competent experts in the field have material
differences of opinion over unresolved scientific disputes. Much novel science exhibits both characteristics. It is constitutionally incapable of providing law with the kind of epistemic warrant for adjudicative fact-finding that expert evidence is called upon and expected to supply.

Of course, there is much truth in this familiar caricature of the complex relationship between law and science, but I have come to think that strong versions of the ‘two irreconcilable cultures’ story are largely works of fiction. It is true to say that fact-finding in criminal adjudication must be based on robust evidence in order to support the finality and legitimacy of criminal verdicts over an extended period of time (for at least as long as a convicted offender is in gaol, for example, which could be thirty or more years for very serious offences). It would be completely inappropriate to base a criminal conviction – or for that matter, an acquittal – on scientific evidence known to be flimsy and liable to be refuted in a matter of weeks or months: this was the fundamental epistemic defect of ‘the unified hypothesis’ exposed in Harris. However, assessing fitness for social purpose is a generic feature of all scientific and technological applications. A civil engineer would presumably not want to build a road bridge out of untested new plastics nor an airline put a prototype jet into commercial service with experimental engines nor a pharmaceutical company take a completely untrialled new wonder-drug to market, any more than the courts should be content to take the socially consequential step of imposing criminal censure and punishment on the basis of unacceptably dubious or fragile scientific evidence. As before, law is special not because it is obliged to make these inherently risky calculations and tradeoffs (maybe civil aviation would have cost fewer lives if we had waited for the invention of the Boeing 747? Perhaps fewer bridges would have collapsed if Telford had been born 100 years earlier?), but because it does so in
particular institutional environments, with characteristically legal objectives and values, under a specific set of practical constraints, etc.

It is instructive to consider how the Court of Appeal in *Henderson* confronted the challenges of scientific uncertainty and expert disagreement in light of these broader considerations and long-running debates. As I have said, the triad and its recent challenge by the unified hypothesis can fairly be regarded as novel (medical) science, and disagreements between experts were a feature of all three conjoined appeals in *Henderson*. However, as we have also seen, the Court was able to pre-empt any serious investigation of disputed scientific facts and opinions in *Butler*, whilst the diagnostic triad was not central to the prosecution’s case in *Oyediran*, where expert evidence of shaking was supported by considerable circumstantial proof of the accused’s violent disposition and criminal intent. Only in Henderson’s case was the Court called upon to grapple directly with the inherent uncertainties of scientific knowledge.

Far from ducking the issue of scientific uncertainty or becoming testy with science’s inability to supply conclusive answers to every legal question susceptible of scientific proof, as the caricature of expert witness testimony might lead one to expect, the Court of Appeal in *Henderson* openly acknowledged the epistemic limitations of current medical science pertaining to head trauma in babies and infants:

We emphasise that we are dealing with natural causes of death within the purview of up-to-date medical knowledge because in this appeal we were properly reminded that at no stage can knowledge in a field such as this be regarded as complete and comprehensive. There are limits to the extent of knowledge and no conclusion should be reached without acknowledging the possibility of an unknown cause emerging into the light of medical perception
and that the mere exclusion of every possible known cause does not prove the deliberate infliction of violence.\textsuperscript{79}

The Court understood perfectly well that scientific inquiry is open-ended in principle and that current scientific knowledge is always, in an important sense, provisional and subject to revision in the light of further experimentation, theoretical breakthroughs and technological innovation. Even when expert witness testimony ventures close to the cutting-edge of modern experimental science, the court’s role is not to dispute or deny the irremediable fact of scientific uncertainty, but to manage that epistemic deficit in an institutionally acceptable fashion.

The Court of Appeal in \textit{Henderson} was invited by the defence to consider ‘a striking development since trial’,\textsuperscript{80} namely a case subsequently reported in the professional medical literature in which one component of the triad – ‘perimacular folds associated with extensive retinal haemorrhages’,\textsuperscript{81} i.e. bleeding behind the eyes – was found to have been caused by illness rather than external trauma:

The discovery of a case of retinal folds due to leukaemia, and, thus, without any traumatic cause, emphasises the importance of recognising the limits of medical knowledge at any given time and the need to appreciate that that which has never previously been contemplated may nonetheless occur. We must recognise the limits of medical science and in particular that there may be events, deaths or symptoms which are unexplained and unforeseen.\textsuperscript{82}

However, the Court did not stop at merely acknowledging the theoretical possibility that one of baby Maeve’s symptoms might have had a non-traumatic cause. In order

\begin{itemize}
\item \textsuperscript{79} [21].
\item \textsuperscript{80} [39]
\item \textsuperscript{81} Ibid.
\item \textsuperscript{82} [43] – [44].
\end{itemize}
to satisfy itself, in accordance with the orthodox theory of appellate review in England and Wales, that the jury’s verdict was supported by verifiably logical and rational inferential conclusions capable of being drawn from the evidence presented at trial, the Court set about trying to determine whether there was any basis on the facts of the instant case for attributing Maeve’s retinal bleeding to leukaemia or some other non-traumatic aetiology consistent with the accused’s innocence. This task required the Court to comb through the reams of expert evidence adduced at trial and on appeal, paying particularly close attention to the precise terms in which each expert had testified, and to express a preference, in relation to certain carefully delineated inferential conclusions, for one expert’s testimony over another’s. This is how, in summary, the Court arrived at the conclusion that retinal bleeding attributable to disease or other non-traumatic cause was not a confounding possibility in Henderson’s case:

We accept, not least because the experts were agreed, that the mechanism of retinal fold formation is not known with certainty. But we reject Professor Luthert’s suggestion that the existence of retinal folds is not a feature additional to the triad. The triad affords strong support, whilst not being conclusive, of shaking or shaking and impact injury absent the presence of retinal folds. Since it is not known how retinal folds are formed there is no sound evidential basis for saying that they occur merely as a result of a haemorrhage. Mr Elston’s evidence, as a clinician, that in 25 years of paediatric ophthalmology he has only ever seen retinal folds in shaking or shaking and impact cases (his evidence at trial, repeated in his report dated March 10, 2009) persuades us that the folds are features pointing towards shaking or shaking with impact over and above the appearance of the haemorrhage…. In those circumstances, Professor’s Luthert’s evidence
amounts to no more than an expression of greater doubt and greater caution than that to which Mr Elston would subscribe.\footnote{[41], [43].}

Notice that the Court does not say that Elston was right and Luthert was wrong. The analysis is far more subtle than the notion of a dispute between party-instructed experts might suggest. The Court’s conclusion is that, even taken at its highest, Professor Luthert’s testimony merely called into question the mechanisms causing retinal folds: yet retinal folds are not part of the triad, which even standing alone is highly probative of NAHI. Moreover, Dr Elston’s extensive clinical experience suggested that retinal folds always indicate NAHI, a conclusion that Professor Luthert’s evidence tempered but could not possibly refute. Dr Elston had seen what he had seen over 25 years, albeit that clinical experience is not the same as properly controlled medical trials or other scientific experimentation. So the Court concludes, reasonably enough, that the presence of retinal folds is not conclusive proof of shaking, but nor has their diagnostic significance been comprehensively undermined. Maeve’s retinal folds could therefore legitimately be presented to the jury as further medical evidence capable of supporting the triad and the other elements of the prosecution’s case proving deliberate shaking.

In the end, experts and judges were all agreed that lingering uncertainties remain. Nobody is really very sure how retinal folds are caused. But the Court of Appeal’s work was done when it had satisfied itself that any material areas of scientific uncertainty had been canvassed in evidence at trial and properly explained to the jury in the trial judge’s summing-up. If a criminal court were obliged to discount every imaginable doubt and theoretical possibility of innocence nobody would ever be convicted and penal justice would never be done. Experimental
hypotheses like Geddes III would become automatic get-out-of-gaol-free cards for child abusers. The jury is fastidiously instructed in the social significance of the task it is called upon to perform in criminal adjudication, and uniquely well-placed (in accordance with the institutional blueprint) to decide whether any residual doubts should preclude a criminal conviction. This is the practical institutional translation of proof beyond reasonable doubt as a normative legal standard. The Court of Appeal was satisfied that there were no other plausible explanations for Maeve’s retinal folds that should have been given greater prominence during the trial or in the judge’s summing-up to the jury: ‘the triad itself afforded a strong basis for the conclusion that shaking or shaking and impact was the cause of Maeve’s sudden collapse. Neither infection nor reperfusion, on the undisputed evidence both at trial and before this court, explained the retinal haemorrhages and folds or the subdural haematoma’. Since the trial judge’s summing-up had been impeccable in every respect and beyond legal criticism, the Court of Appeal’s jurisdiction to review the safety of Henderson’s conviction was now exhausted. Scientific uncertainty had been confronted and managed in the trial process exactly as it should have been.

(c) Conflicts of Expert Authority and Witness Credibility

Expert evidence is generally reckoned to be especially problematic where party-instructed experts disagree. How is the fact-finder supposed to resolve disputes between experts on any kind of rational basis? By definition, the fact-finder lacks relevant scientific or other specialised knowledge or expertise. So the worry is that, in the absence of any rational basis for distinguishing between the testimony of opposing experts, lay jurors will resort to irrational cognitive strategies such as preferring the

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84 [72].
testimony of the expert with greater professional seniority, or the one who spoke most confidently or eloquently in the witness-box, or possibly even the witness regarded as most physically attractive. Alternatively, the jury might opt to ‘split the difference’ between the opposing experts’ evidence (e.g. by returning a verdict of manslaughter where the prosecution’s expert evidence indicated wilful murder and the defence expert offered a theory of innocent accident), or perhaps just ignore the scientific evidence entirely and concentrate exclusively on the non-scientific aspects of the case.

These are not trivial concerns, and some of them are partly substantiated by (limited) empirical research. On the other hand, one should not overlook the risk that a trial jury could be uncritically deferential and excessively swayed in its deliberations by uncontested expert witness testimony. Also, it is not necessarily irrational for the jury to fall back on proxies for evidentiary reliability where it is unqualified to evaluate the substantive merits of a scientific dispute directly. This is a question of matching epistemically defensible proxies to the particular inferential conclusions which expert evidence is being used to authorise in the instant case. In certain scenarios, the relative seniority and experience of opposing experts might well be a legitimate proxy for the reliability of their evidence, for example, whereas – of course – physical attractiveness never could be. Finally, it bears repeating that jury fact-finding takes place in an institutional context in which the risk of error in adjudication – mistakenly convicting the innocent or mistakenly acquitting the guilty – is allocated to the parties on a steeply asymmetrical basis. The accused is entitled to the benefit of any reasonable doubt, in accordance with the presumption of innocence. Accordingly, prosecution expert evidence must make a jury sure of the accused’s guilt, whereas defence experts need only raise a reasonable doubt to secure an acquittal.
All three of the appeals in *Henderson* raised points of expert disagreement, but Henderson’s case itself again provides the most illuminating illustrations for the reasons already well-rehearsed. The previous section summarised the dispute about the causation of retinal folds between Dr Elston for the prosecution and Professor Luthert for the defence. A further strand of the Court’s analysis supporting its ultimate conclusion concerned the proper scope of each witness’s expertise. Professor Luthert himself conceded that the question of traumatic injury causing damage to nerve fibres lay outside his sphere of expertise, and was consequently not a factor which he was competent to assess in determining whether the presence of retinal folds was capable of corroborating the triad:

The evidence of any expert in a particular field is inevitably limited to the field in which he professes expertise. That, of course, is why no expert can be in the position of a jury or, for that matter, of this court, able to put particular evidence in the context of the totality.  

The legitimate boundaries of a witness’s expertise must be studiously policed by trial judges, not merely to ensure, as the Court of Appeal here reminds us, that the jury must always have the last word on the ultimate issue of guilt or innocence. The tendency of genuine experts to stray beyond the bounds of their legitimate expertise is probably a more pervasive problem in English criminal proceedings, and one which is too easily overlooked, than out-and-out charlatanism by scientific frauds posing as expert witnesses. But there is a world of difference between expert opinion and the mere opinions of an expert, and the jury should not be misled into mistaking the latter for the former.

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85 [47].
The cause of the nerve damage suffered by Maeve became an important issue in the case, because if it was evidence of traumatic injury independent of the triad the nerve damage would strongly corroborate the prosecution’s allegations of deliberate shaking. On appeal, the defence proffered the expert testimony of a distinguished Chicagoan neuropathologist, Dr Leestma, who suggested that the nerve damage suffered by Maeve was incapable of supporting any inference of NAHI. The Court of Appeal was completely unimpressed, in the first place because Dr Leestma’s evidence was contradicted by the weight of relevant medical literature, as well as by the testimony of the prosecution’s expert, Dr Al-Sarraj:

[H]is evidence was fundamentally flawed. His insistence on asserting that it was not possible to attribute significance to that axonal damage flies in the face of the references in both Geddes I, II and Reichard and the evidence which flows from Dr Al-Sarraj’s up-to-date experience. We reject his evidence insofar as it fails to attribute significance to that which the beta app staining revealed.\textsuperscript{86}

More generally, the Court of Appeal was troubled by the fact that Dr Leestma lacked recent clinical experience and appeared tout-of-touch with the latest publications and developments in the field:

In our judgment, Dr Leestma’s experience was more historic and far more limited than that of Dr Al-Sarraj. He has not conducted autopsies or given evidence in cases involved with baby-shaking for many years.\textsuperscript{87}

Unsurprisingly, the Court of Appeal concluded that Dr Leestma’s testimony failed to land any blows on the prosecution’s argument that nerve damage was capable of

\textsuperscript{86} [61].

\textsuperscript{87} Ibid.
corroborating the triad of shaking symptoms exhibited by Maeve. Indeed, having heard what he had to say *de bene esse*, the Court was doubtful that Dr Leestma was even a competent expert on the medical issues to which he testified:

Professor Luthert had recognised the importance of the signs of traumatic injury to the axons. In our judgment, nothing in the evidence of Dr Leestma suggested that the importance attached to those signs of injury was unfounded. Indeed, the willingness of Dr Leestma to advance propositions which he subsequently had to withdraw in the light of his greater knowledge of this case, coupled with his lack of up-to-date experience, severely damaged and undermined the effect of his evidence. We would have had considerable doubts as to whether he was properly qualified to give evidence designed to refute the evidence given by Dr Al-Sarraj or Dr Squier at trial. We did not reach any concluded view as to that. It is sufficient to conclude that his evidence did not cast doubt upon the safety of the verdict insofar as it relied upon the signs of traumatic injury to the axons in the cortico-spinal tract.…The consequences of our conclusion as to Dr Leestma’s evidence are that there remains at least one feature of Maeve’s symptoms additional to those constituting the triad. Even if we had accepted Professor Luthert’s evidence that the perimacular folds may have been attributable to the haemorrhaging and were, therefore, just an aspect of the ophthalmological symptoms of the triad, the evidence of traumatic damage to the axons affords powerful additional evidence of trauma. It forms, with the other undisputed symptoms, a safe foundation for the verdict of guilty.

There are indications in other recent cases that the Court of Appeal may be rather too willing to credit clinical or other practical experience over theoretical knowledge, which can be marginalised as ‘merely theoretical’ and consequently

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88 i.e. without first ruling on its admissibility. The Court in fact concluded that Dr Leestma’s evidence was inadmissible on appeal, but that it had been right to hear it owing to the importance and difficulty of the issues at stake.

89 [63], [64].
maladapted and irrelevant to the practical business of resolving disputed questions of fact in criminal adjudication. In *Henderson*, the Court ventured the following general guidance:

The fact that an expert is in clinical practice at the time he makes his report is of significance. Clinical practice affords experts the opportunity to maintain and develop their experience. Such experts acquire experience which continues and develops. Their continuing observation, their experience of both the foreseen and unforeseen, the recognised and unrecognised, form a powerful basis for their opinion. Clinicians learn from each case in which they are engaged. Each case makes them think and as their experience develops so does their understanding. Continuing experience gives them the opportunity to adjust previously held opinions, to alter their views. They are best placed to recognise that that which is unknown one day may be acknowledged the next. Such clinical experience… may provide a far more reliable source of evidence than that provided by those who have ceased to practise their expertise in a continuing clinical setting and have retired from such practice. Such experts are, usually, engaged only in reviewing the opinions of others. They have lost the opportunity, day by day, to learn and develop from continuing experience.

This is all fair comment as far as it goes. At the same time, it is easy to forget that clinical experience is typically *not* scientific in any rigorous experimental or methodological sense, and that bootstrapping appeals to well-established clinical practices, cultures or methods (a kind of medical grandfathering?) do not constitute scientific validation. However, these considerations do not appear to have warped the Court’s analysis and conclusions in *Henderson*. Dr Leestma’s eminence was certainly not treated as a proxy for the reliability of his evidence. Nor was the Court of Appeal

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90 [208].
swayed by Dr Leestma’s charming courtroom manner, which left ‘a most beguiling impression, courteous and understated as it was’. Moreover, his lack of relevant recent clinical experience and ignorance of the latest medical publications were not merely formal pretexts for discounting the probative value of Dr Leestma’s evidence, but demonstrable gaps in the substance of his testimony driven home by the concessions he was forced into making under cross-examination. Taking all these salient factors into consideration, the Court of Appeal’s decision to discount Dr Leestma’s testimony seems eminently rational and paved the way to an epistemically warranted conclusion that Henderson’s conviction was safe.

A final illustration of judicial assessment of expert witness credibility is provided by the appeal in Oyediran. It will be recalled that one of the experts assisting the defence, Dr Squier, had speculated that Femi’s fatal injuries may have been caused or materially affected by undiagnosed HIV. There was no actual evidence of HIV anywhere in the family: Dr Squier’s speculations were motivated purely by Femi’s African parentage. Still, on Dr Squier’s recommendation, the defence consulted Professor Bell, an acknowledged leading expert in the field, to check out Dr Squier’s hunch. The answer came back that there was absolutely no basis for attributing Femi’s injuries to undiagnosed HIV. However, Dr Squier apparently stuck to her guns and refused to rule out the possibility of undiagnosed HIV as a causal factor contributing towards Femi’s injuries, and even insisted – in the teeth of contrary evidence from her GP – that Femi’s mother, Sophia Rudder, might also have been an undiagnosed HIV sufferer. The Court of Appeal was nonplussed by this intransigence:

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91 [218].
There was no evidence whatever that the condition of Femi had anything to do with HIV. There was no evidential basis for any such suggestion. It is, therefore, a matter of regret and surprise that we must record that despite the absence of any evidence of HIV encephalitis and the positive evidence from Professor Bell, who had attracted the praise from Dr Squier which we have recorded, Dr Squier was not prepared, before us, to reject the possibility of HIV encephalitis. She repeated that HIV had not been excluded and referred to the fact that Femi’s father came from a country where it was endemic. Dr Squier should not have persisted in that suggestion… The inadequacies of her evidence were compounded by her persistence in the suggestion that Sophia Rudder might have suffered from HIV and not from MS… Dr Squier… saw fit to suggest HIV despite the reputation of Dr Foster and in apparent ignorance of the very fact that Sophia Rudder was being treated by her. Dr Squier’s approach to that aspect of the evidence supports our views as to the unreliability of her evidence. She should not have suggested that cause of Sophia Rudder’s condition and death without careful consideration of her treatment by Dr Foster and without informing herself of Dr Foster’s qualifications and reputation.92

The Court drew the inevitable conclusions:

Dr Squier’s stance, in oral evidence before us, casts significant doubt upon the reliability of the rest of her evidence and her approach to this case. It demonstrates, to our satisfaction, that she was prepared to maintain an unsubstantiated and insupportable theory in an attempt to bolster this appeal…. In the light of our view as to the quality of Dr Squier’s evidence before us we conclude it is not capable of undermining the safety of the verdict.93

Dr Squier’s behaviour in Henderson (as relayed by the Court of Appeal) seems eccentric to say the least. Why would an expert recommend consulting a named

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92 [188], [189].

93 [188], [190].
specialist on paediatric HIV and then refuse to accept that specialist’s conclusions? Why would an expert persist in an entirely speculative theory about Femi’s mother’s illness, when Sophia Rudder’s GP was in a far better position to make an informed clinical diagnosis? At least as the Court of Appeal tells it, one gets the distinct impression of an expert with a persistent bee in their bonnet, or possibly a forensic practitioner who, in the grip of a distorted conception of adversarial ethics, refuses on principle to make any concession to the prosecution. Alternatively, the Court of Appeal might have got hold of the wrong end of the stick. Dr Squier might have simply been reasserting the ineliminable uncertainty of all scientific propositions, in the sense that falsificationism never rules out any hypothesis absolutely. If so, Oyediran demonstrates that arguing from epistemological truisms and trading on global scepticism are unlikely to be effective forensic strategies for expert witnesses which, moreover, could potentially backfire and inflict serious reputational damage. At any rate, we can easily understand why the Court of Appeal dismissed Dr Squier’s evidence in Oyediran. This was one case in which the credibility of an expert’s testimony was irreparably compromised and rejected on entirely rational and epistemically justifiable grounds.

Conclusion - Doing Justice to Expert Evidence and Scientific Proof

This paper has presented a detailed case study of three conjoined appeals in which contested expert evidence played a central role. In some ways, shaken baby cases are highly atypical of the general run of criminal prosecutions in England and Wales; in other respects they present familiar problems of evidence and proof which frequently recur in criminal trials. However, the value of the exercise is not to be found in any formal claims to statistical representativeness. Instead, I set out to exploit the appeals
in *Henderson* as a foil for describing the institutional mechanisms through which expert evidence and scientific proof are integrated into English legal proceedings – an entire system of criminal adjudication, if you will, reflected in a single case.

There were two major dimensions to my analysis. The first dimension, developed in Section 2, elucidated the distinctive institutional context and normative framework of criminal adjudication in England and Wales. Pivotal to these procedural arrangements is the institutional division of labour between the trial judge and the jury at first instance, and between jury fact-finding and appellate review on appeal. Appreciating the epistemological context of judicial evidence and proof, I suggested, is not merely a question of understanding what is distinctively ‘legal’ in forensic fact-finding, but also requires close and sympathetic attention to the micro-dynamics of local procedural traditions and cultures. It is a work of comparative legal studies as much as an exercise in legal epistemology.

In some respects, these institutional arrangements can be viewed as mechanisms for avoiding or deferring the hard epistemological questions posed by conflicts of scientific and other expert evidence. These issues were more squarely confronted in Section 3. It is often asserted or implied that the law’s treatment of expert evidence is fundamentally irrational and epistemically unwarranted. This is a serious, and seriously troubling, critique, which this paper does not purport to answer comprehensively. Instead, I sought to even up what strikes me as sometimes exaggerated and lopsided criticisms by describing aspects of the Court of Appeal’s analysis and conclusions in *Henderson* that seem – to me, at any rate – perfectly rational and epistemically justifiable. Specifically, I explained why scientific evidence is never self-sufficient proof and must always be evaluated contextually in relation to other evidence in the case, definitively ruling out naïve fallacies like ‘simple medical
proof’. I also provided illustrations of the Court’s treatment of scientific uncertainty and judicial evaluations of expert witness credibility.

Apart from one or two question marks scattered throughout the analysis, this account of English judicial practice has been predominantly descriptive and uncritical. I do not wish to appear complacent about English law’s track-record in dealing with scientific and other expert evidence (which is undeniably marred by proven miscarriages of justice), or to imply that the current system is beyond desirable reform. The philosophy of proactive judicial case management has taken root in English criminal procedure during the last decade, and the advantages of more thorough and collaborative pre-trial case preparation might be regarded as especially pronounced in relation to contested expert evidence. Reiterating the message of numerous recent cases, the Court of Appeal in Henderson stated:

[How]ow is a jury to approach conflicting expert evidence? We suggest it can only do so if that evidence is properly marshalled and controlled before it is presented to the jury. Unless the evidence is properly prepared before the jury is sworn it is unlikely that proper direction can be given as to how the jury should approach that evidence. Thus the jury will be impeded in considering that evidence in a way which will enable them to reach a logically justifiable conclusion…. Justice in such cases depends upon proper advanced preparation and control of the evidence from the outset at the stage of investigation and thereafter…. Proper and robust pre-trial management is essential. Without it, real medical issues cannot be identified. Absent such identification, a judge is unlikely to be able to prevent experts wandering into unnecessary, complicated and confusing detail. Unless the real medical issues are identified in advance, avoidable detail will not be avoided.94

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94 [203], [201], [205].
Further scope for reform might be identified in reformulated rules of admissibility (the recent labours of the Law Commission have produced the draft Criminal Evidence (Experts) Bill 2011, currently before Parliament), development of new codes of ethics and professional responsibility to govern expert witness practice, improved accreditation and regulatory structures, and ongoing programmes of education and training addressing areas of known difficulty, such as statistical evidence and probabilistic reasoning.\(^{95}\) However, it is not complacent – or reactionary – to insist that reformed procedures must be compatible with cherished procedural values and traditions, because this is the fertile soil in which the legitimacy of criminal verdicts takes root (or not, as the case may be). Nor is it complacent to insist that the present system of criminal adjudication, whatever its genuine or imagined shortcomings, must be maintained, sustained and fortified through the efforts of legal professionals unless and until we are in a position to replace it with something demonstrably better.