Northern Ireland
Legal Quarterly
Vol. 77 No. AD1 (2026) 1–31
Articles DOI: 10.53386/nilq.v77iAD1.1327

Expert evidence in criminal law: rethinking reliability in England and Wales after the *Lucy Letby* case

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ABSTRACT

High-profile criminal cases increasingly depend on complex scientific and medical evidence, yet the legal framework governing its admissibility in England and Wales remains strikingly underdeveloped. This article examines that tension through the case of Lucy Letby, a neonatal nurse convicted of the murder of seven infants and the attempted murder of seven others at the Countess of Chester Hospital between 2015 and 2016, where the prosecution case relied heavily on expert interpretation of clinical events. It argues that the current admissibility regime, rooted in common law principles and supplemented by procedural rules, remains permissive and lacks sufficiently robust mechanisms to rigorously evaluate the reliability of expert testimony. Situating these concerns within the Law Commission's 2011 proposals and comparative experience under the United States *Daubert* standard, the article contends that neither procedural reform nor formal gatekeeping tests have resolved the underlying epistemic tensions between law and science. The problem is structural: the criminal process lacks the epistemic infrastructure necessary to evaluate contested scientific evidence in a principled and consistent manner. In response, the article advances a set of integrated reforms, including more structured judicial reasoning, a proportionate pre-trial reliability review mechanism, clearer expectations around accreditation and continuing expertise, and enhanced judicial engagement with scientific reasoning. Ultimately, it argues for a shift towards 'epistemic literacy' as the foundation for a more transparent and defensible approach to expert evidence.

Keywords: expert evidence; criminal law; admissibility; reliability; Lucy Letby; science.

INTRODUCTION

Few criminal trials in recent memory have so starkly exposed the tensions at the intersection of law and science as *R v Letby*.[1] The case concerning the conviction of a neonatal nurse, Lucy Letby, for the murder of seven infants and the attempted murder of seven others at the Countess of Chester Hospital, turned heavily on contested medical and statistical evidence.[2] In the absence of direct eyewitness evidence, expert opinion played a central role in interpreting a complex circumstantial case, effectively providing the framework through which the jury was invited to understand the alleged clinical events. It is precisely this reliance that renders the case so significant. While the Court of Appeal upheld both the admissibility of the expert evidence and the trial judge's directions to the jury, the case has nonetheless provoked sustained unease. Questions remain surrounding the reliability of the underlying science, the independence of expert witnesses and the adequacy of the legal framework regulating them. The continuing scrutiny of the case, including a reported application to the Criminal Cases Review Commission (CCRC) and the anticipated publication of the Thirlwall Inquiry report into systemic failings at the Countess of Chester Hospital underscores that these concerns remain live.[3]

These anxieties are not new. The relationship between law and science has long been marked by epistemic tension. Writing in 1897, William Foster recognised the expert as both a product and a necessity of modernity, an inevitable response to an increasingly technical world, while cautioning that the perceived 'evils' of expert evidence were often overstated and unlikely to be resolved through procedural reform.[4] His pragmatic counsel to 'let well enough alone' reflected a judicial tolerance of imperfection that continues to shape the law's approach.[5] More recently, Paul Roberts has argued that the deeper difficulty lies in the law's misplaced confidence in science as an objective and determinate source of truth, obscuring the interpretive judgements, blind spots and limitations inherent in expert knowledge.[6] This article uses the case of *Letby* as a lens through which to interrogate the conceptual

1 *Letby v R* [2024] EWCA Crim 748.

2 Ibid.

3 Criminal Cases Review Commission (CCRC), 'Lucy Letby application received by Criminal Cases Review Commission' (4 February 2025). See also The Thirwall Inquiry, 'February 2026 update on Final Report' (27 February 2026).

4 William L Foster, 'Expert testimony, prevalent complaints and proposed remedies' (1897) 11 Harvard Law Review 169–186, 172.

5 Ibid.

6 Paul Roberts, 'Expert evidence', *Roberts and Zuckerman's Criminal Evidence* 3rd edn (Oxford University Press 2022).

and procedural assumptions underpinning expert evidence in English criminal law, asking whether the current framework remains adequate in an era of increasingly complex scientific litigation.

The analysis proceeds over the next three sections: the first of these examines the facts of *Letby* and the controversy surrounding the use, scope and influence of expert medical testimony. In doing so, it demonstrates that the evidential difficulties raised by *Letby* are not anomalous but instead reflect a persistent structural vulnerability in the criminal trial process when adjudicating complex scientific claims. The second section analyses the legal framework governing expert evidence in England and Wales, showing how the requirement of 'sufficient reliability' operates in practice as a flexible and often permissive threshold, shaped by judicial discretion and dependent on adversarial testing, despite its well-recognised limitations.[7] The third section examines reform proposals, from the Law Commission's 2011 unimplemented proposals,[8] to comparative developments such as the United States *Daubert* standard[9] and civil law models of court-appointed expertise,[10] advancing a structured programme of reform aimed at improving the transparency, consistency and epistemic grounding of admissibility decisions, without displacing the core features of the adversarial process. In doing so, the article advances a more conceptually rigorous and institutionally grounded account of expert evidence, responsive to the epistemic demands of contemporary criminal adjudication.

THE *LETBY* CASE

> You acted in a way that was completely contrary to the normal human instincts of nurturing and caring for babies and in gross breach of the trust that all citizens place in those who work in the medical and caring professions.[11]

In sentencing Letby to whole-life orders, Mr Justice Goss's sentencing remarks above capture the gravity of the crimes committed, which he went on to condemn as 'a cruel, calculated and cynical campaign of child murder involving the smallest and most vulnerable of children'.[12] However, recent post-conviction developments have sharply divided

7 Gary Edmond and Andrew Roberts, 'Procedural fairness, the criminal trial and forensic science and medicine' (2011) 33 Sydney Law Review 359–394.

8 Law Commission, *Expert Evidence in Criminal Proceedings in England and Wales* (Law Com No 325, 2011).

9 *Daubert v Merrell Dow Pharmaceuticals Inc* 509 US 579 (1993).

10 Roberts (n 6 above).

11 *R v Letby* (Sentencing Crown Court, 21 August 2023) para 3.

12 *Letby* (n 1 above) para 3.

public opinion as to the reliability of the convictions, with high-profile figures such as Member of Parliament Sir David Davis describing it as 'one of the major injustices of modern times'.[13] Beyond Letby's individual culpability, the case has generated widespread public debate and reignited concern over the use of expert evidence in criminal trials and the institutional and management failures that may have contributed to the harm. The facts of the case are as follows: Letby was a neonatal nurse at the Countess of Chester Hospital. During 2015–2016, there was an unprecedented number of baby deaths and 'as the number of unexpected and unexplained collapses and deaths escalated senior doctors started to "think the unthinkable" and consider the possibility that someone was, in fact, deliberately harming the babies'.[14] In May 2017, a police investigation was launched. During the subsequent investigation, Dr Evans, a retired consultant paediatrician, was instructed to review clinical records of the babies in the unit who had died or collapsed suddenly.[15] Letby was subsequently arrested and charged in November 2020 with 22 counts of murder or attempted murder in respect of 17 babies.[16] The trial commenced on 4 October 2022 at Manchester Crown Court before Goss J (the judge) and a jury. Verdicts were returned between 8 and 16 August 2023. The trial lasted 10 months, making it one of the longest murder trials in recent English history.

In the absence of eyewitness testimony, the case was a circumstantial one. The prosecution relied heavily on expert medical evidence[17] and circumstantial material said to cumulatively establish Letby's guilt.[18] Expert evidence was used to support the prosecution's allegations that Letby deliberately harmed infants in her care using five mechanisms, including air embolism (where air was injected into the bloodstream via intravenous lines); air injection via a nasogastric tube; insulin poisoning (where intravenous fluid bags were allegedly contaminated with exogenous insulin); overfeeding with milk and, lastly, physical trauma.[19] These were not matters capable of determination without detailed interpretation of clinical signs, biochemical data and neonatal physiology. Expert testimony was therefore central and not peripheral to establishing causation and Dr Evans remained the lead expert throughout the investigation and trial.[20]

13 Dominic Casciani, 'Letby did not murder babies, medical experts claim' (*BBC News* 4 February 2025).
14 *Letby* (n 1 above) para 6.
15 Ibid para 22.
16 Ibid para 3.
17 Ibid para 32.
18 Ibid para 27.
19 Ibid para 4.
20 Ibid para 23.

The circumstantial case against Letby rested on four strands: firstly, the fact Letby alone was present on the unit at the time of all of the deteriorations and deaths, the so-called 'common factor';[21] secondly, allegations that she falsified medical records to conceal actions or create alternative explanations; thirdly, digital evidence that she searched for victims' families on Facebook after collapses; and, lastly, material found at her home, including over 200 confidential handover sheets and a handwritten note – 'I am evil, I did this' – presented as a confession.[22]

In terms of the defence, although the defence team instructed a number of expert witnesses of their own and many reports were served from them before and during the trial, no medical expert evidence was called on Letby's behalf at the trial.[23] The entirety of the defence case comprised Letby's own testimony and the evidence of an estate plumber, employed at the hospital since 1986.[24] His evidence concerned general plumbing issues within the unit and two specific incidents; however, neither incident corresponded to any date or event charged in the indictment.[25] The defence's decision not to call its own experts arguably left the jury without an alternative explanatory framework for understanding the complex medical causation issues at the heart of the case. Relying solely on cross-examination to expose deficiencies in expert reasoning places an unrealistic burden on lay jurors, particularly in highly technical cases involving complex forensic science or medical causation.[26] In her testimony, Letby denied intentionally causing harm to any of the infants.[27] She offered explanations for the circumstantial evidence, asserting that as a relatively newly qualified intensive care nurse she was highly committed to her work. She maintained that her Facebook searches, including those for bereaved families, were routine and should be understood within the context of her wider search activity. She stated that she had taken the handover sheets home inadvertently and subsequently forgotten about them, noting that only 21 of those sheets related to infants in the indictment. The defence also 'challenged the good faith of some of the medical witnesses on the grounds that the applicant was being scapegoated for substandard care in the unit due to understaffing and the increase in the numbers and vulnerability of the babies in the unit'.[28] The jury reached verdicts

21 Ibid para 6.
22 Ibid.
23 Ibid para 5.
24 Ibid.
25 Ibid.
26 Edmond and Roberts (n 7 above).
27 *Letby* (n 1 above) para 31.
28 Ibid para 32.

after 22 days of deliberations. Letby was convicted of seven counts of murder, seven counts of attempted murder, found not guilty on two counts of attempted murder and the jury was discharged on 18 August 2023 after failing to reach verdicts on six additional counts.[29] On 21 August 2023, the applicant was sentenced (in her absence) to life imprisonment, with a whole life order on each count on which she was convicted, Goss J stating, 'you will spend the rest of your life in prison'.[30] Letby was subsequently struck off the nursing register.[31]

Appeal

Letby sought leave to appeal her conviction on four principal legal grounds, contending that her trial was procedurally unfair and legally flawed. First, that the judge was wrong not to direct the jury to disregard the evidence given by Dr Evans and was wrong to admit further evidence from him (ground 1).[32] The Court of Appeal rejected this argument, determining that Dr Evans was well-qualified to provide expert opinions and that any perceived bias was a matter for the jury to assess. The court concluded that the trial judge had acted within his discretion in allowing his testimony. Secondly, that the judge was wrong to reject the submission of no case to answer made by the defence at the conclusion of the prosecution case (ground 2).[33] The Court of Appeal dismissed this claim, stating that the prosecution had substantial evidence, including medical records, expert testimonies and Letby's own notes, which were sufficient to warrant consideration by the jury. Thirdly, that the judge was wrong to direct the jury that it did not have to be sure of the precise harmful act or acts on any given count on the indictment (ground 3).[34] The Court of Appeal found that the jury had been properly instructed on the legal standards and that the directions provided were appropriate given the complexities of the case. Fourthly, that the judge did not take the correct course in investigating a potential jury irregularity arising out of a complaint first made to the court on 2 August 2023 (ground 4).[35] The Court of Appeal held that the trial judge had appropriately addressed all matters concerning the jury's conduct and correctly followed the procedure in paragraph 8.7 of the Criminal Practice Directions (CPD) 2023. Further

29 Ibid para 7.
30 Ibid para 21.
31 Nursing and Midwifery Council, 'Fitness to Practise Committee, Substantive Hearing' (12 December 2023).
32 *Letby* (n 1 above) para 13.
33 Ibid.
34 Ibid.
35 Ibid.

that 'the extent and nature of the investigation was a matter for the judge who exercised that discretion reasonably'.[36]

Letby also sought leave to introduce fresh evidence in the form of two reports by Dr Shoo Lee, a neonatologist and co-author of the 1989 paper on pulmonary vascular air embolism in newborns, which featured prominently in the trial.[37] The defence argued this evidence supported their position that prosecution experts had improperly used skin discolouration as a diagnostic indicator of air embolism, beyond the study's established parameters. Additionally, that Dr Lee's evidence, combined with weaknesses in the prosecution's scientific evidence on air embolism, rendered convictions on multiple counts unsafe, thereby undermining the overall safety of the verdict. The Court of Appeal held that 'the proposed fresh evidence does not provide a ground for allowing the appeal and there is no reasonable explanation why it was not called at trial'.[38] The Court of Appeal rejected Letby's appeal, commended the trial judge for handling the case with 'exemplary skill and patience',[39] and agreed with the single judge's reasoning for refusing leave to appeal.[40] The court concluded that none of the grounds advanced were arguable and that the criteria for admitting fresh evidence had not been met.[41]

Beyond the verdict

In February 2025, Letby's legal team convened an 'astonishing'[42] press conference, presenting medical evidence from an international panel comprising 14 'experienced and distinguished paediatricians and neonatologists'.[43] The panel, chaired by Dr Shoo Lee, undertook a detailed examination of the 17 cases forming the basis of Letby's prosecution and produced what was described as an 'impartial, evidence-based report'.[44] Dr Lee stated that they had concluded that 'in all cases, death or injury were due to natural causes or simply poor medical care' and that 'the medical evidence does not support murder in any of these babies'.[45] Rather, he identified multiple systemic deficiencies at the Countess of Chester Hospital, remarking that the standard of care was so deficient that 'if this was a hospital in Canada,

36 Ibid para 207.
37 Ibid para 15.
38 Ibid para 191.
39 Ibid para 17.
40 Ibid.
41 Ibid para 18.
42 Jon Robbins, 'A system in crisis?' *New Law Journal* (London 15 February 2025).
43 Casciani (n 13 above).
44 Ibid.
45 Ibid.

it would be shut down'.[46] These deficiencies included staff caring for infants 'probably beyond their expected ability or designated level of care';[47] unsafe delays in both diagnosis and treatment, as well as in the transfer of high-risk neonates to specialist tertiary centres; inadequate resuscitation and intubation skills among clinical staff; insufficient supervision of junior doctors during critical procedures such as intubation; and a 'lack of teamwork and trust between the health professionals'.[48] Dr Lee opined that many of the witness statements from Letby's trial, provided to the panel alongside medical records by her legal team, highlighted 'serious resourcing and infrastructure deficiencies'[49] within the hospital. These included 'inadequate numbers of appropriately trained personnel in the unit, lack of training for assigned nursing roles, inadequate staffing and workload overload and poor plumbing and drainage resulting in the need for intensive cleaning in the unit'.[50] Dr Lee's report has been submitted in support of Letby's application to the CCRC.[51] In determining whether to refer the case to the Court of Appeal, the CCRC must assess whether the new evidence and/or argument gives rise to a 'real possibility' that the original convictions would not be upheld,[52] applying the statutory test under the Criminal Appeal Act 1995. While the outcome of that process remains uncertain, the application illustrates that questions surrounding the evidential basis of the convictions remain live.

After the convictions, Cheshire Police also announced an investigation into potential corporate manslaughter liability at the Countess of Chester Hospital, focusing on the actions and decisions of senior leadership.[53] This is in addition to investigations into individual gross negligence manslaughter charges against staff members.[54] At the time of writing, both remain ongoing. In addition, a formal public inquiry was commissioned by the Government in 2024 to examine systemic failures in oversight, whistleblowing protections and managerial

46 Laurence Sleator and Mario Ledwith, 'Lucy Letby press conference: nurse "did not murder babies" — as it happened' *The Times* (London 4 February 2025).

47 Ibid.

48 Elisabeth Mahase, 'Lucy Letby: what next for the case after an expert panel found no evidence of murder?' (2025) 388 British Medical Journal 300.

49 *Letby* (n 1 above) para 18.

50 Ibid.

51 CCRC (n 3 above). The CCRC is an independent body set up under the Criminal Appeal Act 1995 to independently review suspected and alleged miscarriages of criminal justice in England, Wales and Northern Ireland.

52 For more on the CCRC, see Carolyn Hoyle and Mai Sato, *Reasons to Doubt: Wrongful Convictions and the Criminal Cases Review Commission* (Oxford University Press 2019).

53 Paul Burnell and Jonny Humphries 'Manslaughter probe at Letby hospital expanded' (*BBC News* 13 March 2025).

54 Ibid.

accountability at the Countess of Chester Hospital.[55] Chaired by Lady Justice Thirlwall, evidence before the inquiry highlighted significant concerns regarding institutional responses to early warning signs and the handling of clinical risk, with senior figures, including Sir Duncan Nichol, former chairman of the hospital, acknowledging failures in governance and patient safety and expressing apologies for the 'unimaginable grief' suffered by affected families.[56] The inquiry has now concluded, with publication of the report anticipated in spring/summer 2026.[57] Although not legally binding, public inquiry recommendations can significantly shape the regulatory and evidential landscape, as seen in the reforms following the Harold Shipman case and the subsequent Smith Inquiry.[58] Their impact, however, depends on political will, institutional uptake and effective implementation.[59] More broadly, these developments have renewed and intensified scrutiny of the role, reliability and regulation of expert testimony in criminal trials, reinforcing the concerns that lie at the heart of this article.

THE LAW ON ADMISSIBILITY: COMMON LAW FOUNDATIONS AND PROCEDURAL OVERLAY

The *Letby* case must be situated within a broader and enduring epistemic tension between law and science, which continues to shape the treatment of expert evidence in criminal trials.[60] This tension arises from the fundamentally different ways in which each discipline constructs and validates knowledge. Scientific reasoning proceeds through hypothesis, testing and revision and is characterised by uncertainty and provisional conclusions.[61] By contrast, the criminal law is institutionally committed to finality and binary outcomes: guilt

55 Thirlwall Inquiry, The Thirlwall Inquiry (2 December 2024).

56 Judith Moritz and Johnny Humphries, 'Letby hospital boss accepts "big personal failure"' (*BBC News* 2 December 2024).

57 Thirlwall Inquiry (n 3 above).

58 Rosemary Field and Alastair Scotland 'Medicine in the UK after Shipman: has "all changed, changed utterly"?' (2004) 364 The Lancet 40–41.

59 See Kieran Walshe and Joan Higgins, 'The use and impact of inquiries in the NHS' (2002) 325 British Medical Journal 895, and Graham P Martin, Susanna Stanford and Mary Dixon-Woods, 'A decade after Francis: is the NHS safer and more open?' (2023) 380 British Medical Journal 513 (both showing influence alongside a persistent 'implementation gap').

60 Roberts (n 6 above).

61 Karl Popper and Karl Popper, *The Logic of Scientific Discovery* 2nd edn (Routledge 2002).

or innocence, conviction or acquittal.[62] When scientific knowledge is introduced into the courtroom through expert testimony, these differing epistemic commitments collide, requiring courts to translate probabilistic and contested interpretations into determinate legal judgments.[63] It is this epistemic mismatch that underpins the law's approach to admissibility. The requirement that expert evidence demonstrates 'sufficient reliability' is intended to mediate this tension, ensuring that only evidence capable of safely informing the fact-finding process is admitted.[64] However, the operation of this standard remains uneven and often deferential, reflecting a continued reliance on judicial discretion and adversarial testing to resolve questions that are, at their core, epistemic rather than purely procedural. These epistemic tensions are translated into legal form through the rules governing admissibility, which seek to regulate expert evidence through a combination of common law principles and procedural safeguards, albeit with uneven success.

Common law principles: competence, relevance, reliability

Under English law, the admissibility of expert evidence is traditionally governed by an explicit, though loosely defined focus on reliability. The classical authority of *R v Turner* (1975)[65] limits expert testimony to matters outside 'the ordinary experience of a jury', thereby establishing necessity as the threshold justification for admitting opinion evidence. This was subsequently developed in *R v Bonython* (1984),[66] which articulated a two-stage test requiring, first, that the subject matter form part of a body of knowledge or experience sufficiently organised and reliable to be admissible and, secondly, that the witness possesses expertise within that field. Subsequent decisions, including *R v Luttrell* (2004)[67] and *R v Dlugosz* (2013)[68] have sought to refine this framework in response to emerging and increasingly technical forms of evidence. However, while the language of reliability has become more prominent, its doctrinal operation remains limited.

In practice, the threshold for admissibility remains relatively permissible, with courts tending to defer to professional qualifications and experience, rather than rigorously interrogating the methodological

62 Paul Roberts and Adrian Zuckerman, *Criminal Evidence* 3rd edn (Oxford University Press 2023).

63 Susan Haack, *Evidence Matters: Science, Proof, and Truth in the Law* (Cambridge University Press 2014).

64 CPD 2023, V Evidence 19A; CrimPR 2020, pt 19; Law Commission,(n 8 above).

65 *R v Turner* [1975] QB 834.

66 *R v Bonython* (1984) 38 SASR 45.

67 *R v Luttrell* [2004] 2 Cr App R 31.

68 *R v Dlugosz* [2013] EWCA Crim 2.

validity of the expert's reasoning. This approach reflects what Gary Edmond and Andrew Roberts have described as 'epistemic deference', a judicial posture that privileges credentials over scrutiny and authority over demonstrable reliability.[69] Although the Criminal Procedure Rules (CrimPR) 2020 and the associated CPD now require experts to provide transparent reasoning, disclose limits in their methodology and identify the basis of their opinions, these obligations have not fundamentally altered the structure of admissibility.[70] Empirical and doctrinal analyses suggest that, in the absence of competing expert evidence, courts and counsel rarely engage in sustained scrutiny of the scientific foundations of expert testimony unless it is manifestly flawed.[71] As a result, the evaluation of reliability remains heavily dependent on adversarial challenge, despite the limited capacity of cross-examination to interrogate complex scientific evidence.[72] This assumes that epistemic weaknesses will surface at trial, an assumption that is increasingly fragile in cases involving specialised or contested expertise. More fundamentally, the doctrinal framework of admissibility does not resolve these underlying epistemic difficulties but defers their resolution to the trial process, displacing responsibility in a way that has prompted renewed scrutiny of the role and limits of expert testimony.

The nature and function of expert evidence: renewed scrutiny

Against this backdrop, it becomes necessary to look beyond the formal rules of admissibility to the nature and function of expert testimony itself. As a starting point, the law draws a distinction between fact and opinion evidence, confining ordinary witnesses to the former while permitting expert witnesses, by way of exception, to offer opinion evidence where specialised knowledge is required to assist the court.[73] However, as Paul Roberts observes, the characterisation of expert evidence as an 'exception' to the rule against opinion evidence gives rise to two conceptual difficulties: first, the distinction between 'fact' and 'opinion' is far less certain than the doctrine suggest, as testimony often involves interpretation and judgement. Secondly, many expert statements, specifically in medical and forensic contexts, combine specialised factual material with opinion, making the conventional exception framework misleading. This artificial categorisation obscures the complexity of modern expert evidence, which is not

69 Edmond and Roberts (n 7 above).
70 CrimPR 2020, pt 19;CPD 2023, V Evidence 19A.
71 Law Commission (n 8 above) paras 3.33–3.45.
72 Ibid.
73 *R v Turner (Andrew Neil)* [2020] EWCA Crim 1241, para 36.

purely opinion-based, but involves the presentation and interpretation of specialised factual material. The result is an analytical framework that fails to capture the complexity and diversity of modern expert evidence, encouraging an artificial categorisation that obscures rather than clarifies the role of expertise within the trial process.[74] This conceptual ambiguity is compounded by the institutional conditions under which expert evidence is produced and presented, which is addressed later. Suffice it is to say here that the value of having expert evidence is both clear and long-standing, as Foster observed, and the use of scientific expertise is not merely desirable but essential to the proper administration of justice, enabling courts to engage with matters beyond ordinary experience and avoid the risk of erroneous decision-making where specialised knowledge is required.[75] The rise of the expert witness is both a product and a necessity of modernity, reflecting the expansion of scientific and technological knowledge and its increasing relevance to legal disputes.[76] This necessity is particularly evident in complex criminal trials and, as Sir Robin Spencer observed in refusing leave to appeal in *Letby*, the case involved 'a vast quantity of technical medical material which could not possibly be understood or evaluated without the assistance … of a properly qualified expert'.[77] The reliance placed on expert evidence in complex cases such as *Letby* has intensified scrutiny of whether existing safeguards are adequate to ensure its reliability, independence and appropriate evidential weight.[78] These conceptual concerns are mirrored in doctrinal attempts to define the scope and limits of expert assistance.

Assistance and the boundaries of expertise

A central condition of admissibility is that expert evidence must 'assist' the court, yet the boundaries of such assistance are neither fixed nor easily policed. English law defines an expert as an individual possessing specialised knowledge or experience beyond that of the average juror to render their opinion capable of assisting the court. The foundational decision in *R v Silverlock*[79] established that such expertise may derive from study or practical experience, provided it exceeds ordinary lay

74 Roberts (n 6 above).
75 Ibid.
76 Ibid.
77 *Letby* (n 1 above) para 116.
78 Jonny Humphries 'Why Letby case is under more scrutiny than ever' (*BBC News* 17 March 2025). For concerns around use of expert witnesses, see Lauren Sutherland QC, 'When experts go wrong' (*Clinical Negligence, Law & Ethics* 22 June 2022); *R v Clark* [2003] All ER (D) 223; *Meadow v General Medical Council* [2006] All ER (D) 315 (Oct).
79 *R v Silverlock* (1894) 2 QB 766.

competence. This principle was reaffirmed in *R v Turner*,[80] where the Court of Appeal emphasised that expert opinion is admissible only in relation to matters outside the jury's ordinary experience. These common law principles are now reflected and elaborated in the CrimPR and CPD, which require that expert evidence must be both relevant and reliable, grounded in recognised principles within the expert's discipline and provided by an individual demonstrably qualified through training, experience or research.[81] Expert reports must therefore set out the witness's qualifications, experience and any accreditation, providing a formal basis upon which their expertise may be assessed.[82] However, the law stops short of prescribing minimum standards of qualification or accreditation. These problems are illustrated by the case of Gene Morrison, who in 2007 was exposed as a spurious expert, who over a period of three decades, had given 'expert' evidence in over seven hundred cases while lacking any genuine academic or professional qualifications.[83] Morrison fabricated credentials in forensic science and criminology and was paid to provide 'expert' analysis that lacked scientific foundation, methodological rigour or peer-reviewed validation. This case exposes the fragility of a system that allows expertise to be accepted without proper verification of qualifications and highlights the risks of relying on professional presentation, rather than demonstrable competence. This concern is reinforced by research from the University of Exeter Evidence Based Justice Lab, which identified 498 alleged miscarriages of justice between 1970 and 2026, 80 (16%) involving false or misleading forensic evidence.[84]

Even impressive credentials are not a guarantee of methodological competence or evidential reliability.[85] This is illustrated by the case of Sally Clark, convicted in 1999 for the murder of her two infant sons, based on the misleading expert evidence provided by eminent paediatrician, Professor Sir Roy Meadow.[86] His statistical evidence that the chance of two sudden infant deaths in the same family was '1 in 73 million'[87] ignored the potential for genetic or environmental correlation and was described by the Court of Appeal as a 'misuse of statistics',[88] 'manifestly wrong and misleading'.[89] After serving more

80 *R v Turner* [1975] QB 834.
81 CPD 2023, 7.1.
82 CrimPR, Rule 19.4(a).
83 BBC News, 'Fraudulent forensic expert jailed' (*BBC News* 22 February 2007).
84 Evidence Based Justice Lab, 'Miscarriages of Justice Registry'.
85 Roberts (n 6 above).
86 *R v Clark (Sally)* [2003] EWCA Crim 1020, [2003] 2 FCR 447.
87 Ibid.
88 Ibid.
89 Ibid.

than three years in prison, her conviction was quashed in 2003 when previously undisclosed medical evidence emerged that undermined the prosecution case. Sally Clark died in 2007, aged 42, from acute alcohol intoxication, widely understood as a consequence of the psychological trauma she suffered as a result of her wrongful conviction.[90] Although the General Medical Council initially struck Meadow off for serious professional misconduct,[91] the Court of Appeal reinstated him, holding that an honestly held erroneous opinion, even if seriously flawed, did not necessarily amount to serious professional misconduct, absent dishonesty or recklessness.[92] The case highlights how expert evidence exceeding methodological competence can profoundly distort the fact-finding process, particularly when presented with the authority of scientific certainty, with devastating consequences for the individual.

The miscarriage of justice associated with Clark reveals the limits of existing safeguards when applied in practice, notwithstanding the fact that the requirement that expert evidence must 'assist the court' within the confines of the witness's demonstrable expertise, remains a central organising principle of both civil and criminal procedure.[93] The CrimPR provides that an expert 'must help the court to achieve the overriding objective by giving opinion which is objective and unbiased'[94] and that this duty 'overrides any obligation to the person from whom the expert receives instructions or by whom the expert is paid'.[95] This duty requires experts to remain within the limits of their expertise and also to acknowledge uncertainty and avoid presenting contested opinions as settled fact.[96] However, the boundary between legitimate assistance and impermissible overreach is inherently unstable and experts do overreach and stray beyond the confines of their expertise. In *Squier v General Medical Council*,[97] it was held that Dr Waney Squier, a consultant neuropathologist, who often gave defence evidence for parents accused of harming their babies, had presented disputed theories as established fact and opined outside

90 Clare Dyer, 'Falsely convicted Sally Clark dies suddenly' (2007) 334 (7594) British Medical Journal 602–603.

91 *General Medical Council v Meadow* [2006] EWCA Civ 1390, [2007] QB 462.

92 Ibid paras 190–202.

93 First articulated in *National Justice Compania Naviera SA v Prudential Assurance Co Ltd ('The Ikarian Reefer')* [1993] 2 Lloyd's Rep 68 (Cresswell J).

94 CrimPR, r 19.2(1)–(3) (as amended by Criminal Procedure (Amendment No 2) Rules 2023); CPD 2023, 19A.1–19A.5.

95 Ibid.

96 CrimPR 2020, r 19.2.

97 *Squier v General Medical Council* [2016] EWHC 2739 (Admin), [2017] 1 WLR 4285.

her expertise, selectively citing research in a misleading way.[98] The High Court upheld the core determination that Dr Squier had failed to maintain the objectivity required of an expert witness and had crossed the boundary from assistance into advocacy.[99] Similarly, expert overreach occurred in *R v Sellu*[100] when 'eminent' colorectal consultant Mr Sellu was convicted of gross negligence manslaughter, based on expert testimony that strayed beyond clinical standards to opine that Sellu's conduct was 'grossly negligent', a legal conclusion for the jury. The Court of Appeal quashed the conviction, finding misdirection and expert overreach had rendered the verdict unsafe and Mr Sellu was acquitted, after serving 18 months in custody.[101] The case underscores the fragility of the 'assistance' requirement and how expert evidence can slip from explanation to evaluation, particularly where the distinction between scientific judgement and legal evaluation is blurred.

These concerns are reflected in *Letby*, where much criticism has centred on the prosecution expert, Dr Evans, including the scope of his expertise, prior investigative involvement and the lack of any recent clinical experience.[102] Although the Court of Appeal did not accept these as grounds for appeal, concerns surrounding his role and evidence have reportedly resulted in a complaint to the General Medical Council.[103] Such concerns underscore continuing unease about the adequacy of safeguards to ensure expert evidence is impartial, methodologically sound and confined to the expert's proper sphere of competence.

Impartiality, the duty to the court

Alongside the requirement of assistance, the legitimacy of expert evidence depends upon its independence. As noted above, under the CrimPR, expert witnesses owe an overriding duty to the court to provide objective, unbiased and independent evidence, which overrides any obligation to the instructing party.[104] However, whilst experts are required to act independently, the adversarial context within which expert evidence is generated gives rise to a persistent

98 Medical Practitioners Tribunal Service, *General Medical Council v Dr Waney Squier* (Determination on Impairment and Sanction, 21 March 2016). See also Clare Dyer, 'Doctor who gave expert advice in "shaken baby" cases is struck off' (2016) British Medical Journal 352.

99 *Squier* (n 97 above).

100 *R v Sellu* [2016] EWCA Crim 1716.

101 Ibid.

102 David Conn and Felicity Lawrence, '"My kind of case": intense focus falls on Lucy Letby trial expert witness' *The Guardian* (London 20 December 2024).

103 Felicity Lawrence, 'Lucy Letby: killer or coincidence? Why some experts question the evidence' *The Guardian* (London 9 July 2024).

104 CrimPR 2020, r 19.2(1).

risk of partisanship. More than a century ago, Learned Hand warned that the adversarial system risks distorting scientific truth by turning experts into 'hired champions of one side' and the courtroom into a battleground of advocacy rather than inquiry, where science is subordinated to persuasion.[105] More recently, as Paul Roberts observes, the permissive threshold for recognising expertise in English law perpetuates the 'perennial anxiety' that party-instructed experts may unconsciously internalise partisan perspectives, undermining epistemic neutrality.[106] On this view, the problem is structural rather than merely individual. As Francis Goodall asks: how can an expert avoid partisanship within a system that privileges persuasion over truth?[107] He likens the expert to a three-card-trick performer: one who, without misrepresentation, may use a 'sleight of mind' to present evidence favourably while remaining within the rules of the adversarial process.[108] Reflecting this concern, Laddie J in *Cala Homes (South) Ltd and Others v Alfred McAlpine Homes East Ltd*,[109] emphasised that, while it is the court's role to discover the truth by assessing party-led evidence, it must not be naive. Although courts recognise that experts are selected for their sympathetic views, they may still assume that experts prioritise accuracy and honesty over partisanship,[110] an assumption that risks lowering judicial vigilance. This judicial confidence sits uneasily with the structural realities of adversarial litigation.

The *Letby* case exemplifies this tension. The lead prosecution expert, Dr Evans, maintained: 'I'm completely independent … I'm not here for the prosecution. I'm not here for the defence. I'm here for the court.' [111] Yet concerns were raised about Dr Evans's impartiality and early investigative involvement.[112] Dr Evans admitted that he approached the police when he heard of the investigation, stating he would 'be interested to help' and that it 'sounds like my kind of case'.[113] Before the Court of Appeal, it was argued that this blurred the

105 Learned Hand, 'Historical and practical considerations regarding expert testimony' (1901) 15 Harvard Law Review 40–58.

106 Roberts (n 6 above).

107 Francis Goodall, 'The expert witness: partisan with a conscience' (1990) 56(3) Arbitration 159–161.

108 Ibid.

109 *Cala Homes (South) Ltd and Others v Alfred McAlpine Homes East Ltd* (1995) IP & T Digest 18.

110 Ibid.

111 BBC, 'Lucy Letby: expert denies "reaching" to support allegations' (*BBC News* 1 November 2022).

112 *Letby* (n 1 above) para 37.

113 Kim Pilling, 'Bid to exclude evidence of prosecution medical expert was refused by judge' *The Independent* (London 18 August 2023).

line between expert and investigator, undermining objectivity.[114] The court rejected this, holding that his involvement did not preclude him from acting as an expert witness.[115] In the absence of any prohibition within the CrimPR, or CPD, Dr Evans's involvement at both the investigative and trial stages was deemed permissible and not, in itself, indicative of partiality.[116] However, allowing such dual roles without clear safeguards or transparency risks diluting the expert's duty to the court and blurring the boundary between independent expertise and prosecutorial alignment.

Against this backdrop, the ideal of impartial expertise sits uneasily with the structural realities of adversarial litigation. Experts are selected and instructed by the parties, creating an inherent risk that their evidence aligns, consciously or otherwise, with partisan interests. While Brecker suggests 'the days of the "hired gun" are now long gone',[117] recent empirical evidence indicates otherwise. A 2024 survey found that 187 of 537 respondents had encountered 'hired-gun' experts in their field within the previous year, describing a recurring tendency for some witnesses to search for evidence 'to substantiate the opinion preferred by the instructing party, rather than looking at the circumstances and evidence as a whole'.[118] A significant proportion also indicated that they had recently encountered experts whom they considered inadequately qualified for the disputes on which they opined.[119] These findings point to a structural problem: adversarial incentives, financial dependence and confirmation bias can undermine epistemic reliability. As Hand warned, expert evidence risks reinforcing party narratives rather than illuminating facts,[120] placing increasing strain on judicial gatekeeping.

Admissibility and judicial discretion and interpretive variance

Although the CrimPR and CPD frame admissibility in terms of relevance, competence and 'sufficient reliability', these standards remain highly general and afford considerable latitude in application. In practice, admissibility is largely left to judicial discretion, producing a flexible

114 *Letby* (n 1 above) para 107.
115 Ibid para 116.
116 Ibid.
117 Stephen Brecker, 'The expert witness: the doctor's perspective' (2009) 95 BMJ Heart 763–765.
118 Mark Solon, The Bond Solon Expert Witness Survey (8 November 2024).
119 Ibid: 213 out of 537 respondents answered 'yes' to having come across experts who did not have the right qualifications and experience appropriate to the issue in dispute.
120 Hand (n 105 above).

but uneven approach. Concerns about methodological robustness, scope of expertise and potential bias are often treated as matters of weight rather than admissibility, deferring meaningful scrutiny to the trial process itself. In *Henderson*,[121] the Court of Appeal provided guidance on case management where the prosecution case rests solely on expert evidence. Drawing on the 2004 Kennedy Report on *Sudden Unexpected Death in Infancy*, the court endorsed a checklist for trial judges, including whether the expert remains in practice, their area of expertise and when they last encountered a relevant case.[122] The report further advised that 'experts should have recent clinical experience, peer reviewed research and should not roam outside his or her area of expertise'.[123] The court placed particular emphasis on ongoing clinical practice, recognising its role in maintaining up-to-date and reliable expertise. Observing that those retired from practice may have 'lost the opportunity, day by day, to learn and develop from continuing experience'.[124] The application of these principles in subsequent cases has been far from uniform. As noted earlier, in *Letby*, the Court of Appeal upheld the admissibility of Dr Evans's evidence, despite his retirement in 2009 and lack of recent clinical practice, concluding that he retained sufficient expertise to assist the jury, particularly on issues outside their experience.[125] The court also noted that Dr Evans had undertaken training for his role, having 'attended a number of courses to equip [him] to perform [the] role'[126] of an expert witness. In assessing reliability, it placed weight on the peer review of his reports by Dr Bohin, a practising consultant neonatologist.[127] This reflects a pragmatic approach to admissibility, prioritising assistance to the jury over demonstrable methodological rigour or current clinical practice. While his evidence was admitted,[128] the case raises broader concerns about reliance on retired or non-practising experts in complex criminal prosecutions, particularly in the absence of opposing expert evidence and underscores the need for stronger safeguards to ensure reliability and neutrality.[129] Furthermore, the Court of Appeal's acceptance of Dr Evans's evidence in *Letby*, reflects a broader pattern of judicial

121 *R v Henderson* [2010] EWCA Crim 1269.
122 Helena Kennedy, Sudden Unexpected Death in Infancy (Report of Working Group convened by the Royal College of Pathologists and the Royal College of Paediatrics and Child Health September 2004) 7.
123 Ibid 5.
124 *Henderson* (n 121 above) para 208.
125 *Letby* (n 1 above) para 115.
126 Ibid para 114.
127 Ibid para 23.
128 Ibid para 37.
129 Law Commission (n 8 above).

flexibility. In cases such *R v Clare and Peach* [1995],[130] expertise has been inferred from familiarity, rather than formal qualification or validated methodology, with a police officer treated as an 'expert ad hoc' after repeated viewing of CCTV footage.[131] In both cases, admissibility rested less on rigorous epistemic scrutiny, than on perceived usefulness. Absent clearer standards, such as accreditation, requirements of continuing competence or structured reliability thresholds, courts remain at risk of admitting expert evidence whose authority exceeds its scientific foundation.

The Law Commission's 2011 report on *Expert Evidence in Criminal Proceedings in England and Wales*[132] warned that the permissive approach to admissibility risked allowing speculative or methodologically unsound expert opinions to unduly influence juries, particularly in complex scientific or medical cases.[133] This risk was amplified where experts exceeded their expertise, or where opposing counsel lacked the technical capacity to scrutinise their reasoning. The Commission therefore proposed a structured reform package centred on the introduction of a statutory admissibility framework,[134] supported by judicial guidance on indicators of unreliability and clearer pre-trial screening mechanisms, alongside codification of core principles and enhanced procedural rules.[135] Although widely welcomed, the Ministry of Justice declined to legislate in 2013, citing resource constraints.[136] Reform instead proceeded incrementally: elements of the proposals were incorporated into the CrimPR (now part 19) and CPD, strengthening transparency and identifying relevant reliability factors.[137] In his 2014 Kalisher Lecture, the then Lord Chief Justice described this as 'a novel way of implementing an excellent Report'.[138]

The Government took the view that amendments to the CrimPR and CPD 'could increase the likelihood of the trial judge and the opposing party, where appropriate, challenging expert evidence' and 'would go

130 *R v Clare and Peach* [1995] Crim LR 947; Roberts (n 6 above).
131 *Clare and Peach* (n 130 above).
132 Law Commission (n 8 above).
133 Ibid paras 1.10–1.12.
134 Ibid paras 1.13–1.18, 3.10–3.18.
135 Ibid paras 1.19–1.25.
136 Ministry of Justice, 'The Government's response to the Law Commission report: "Expert evidence in criminal proceedings in England and Wales (Law Com No 325)"' (21 November 2013).
137 See the revisions of CrimPR, pt 33 (now pt 19) and the introduction of Criminal Practice Direction 33A, subsequently consolidated as CPD V Evidence 19A and now para 7 of the CPD 2023.
138 Michael Stockdale and Adam Jackson, 'Expert evidence in criminal proceedings: current challenges and opportunities' (2016) 90(5) Journal of Criminal Law 344–363.

some way towards reducing the risk of unsafe convictions as a result of unchallenged inappropriate or unreliable expert evidence'.[139] However, their application remains discretionary and dependent on judicial confidence in evaluating scientific evidence, an area in which courts may lack the necessary epistemic expertise. As Ward observes, this amounts to 'implementation without legislation': they reflect the spirit but not the substance of the Law Commission's reforms.[140] The result is a more transparent procedural framework, but one that leaves unresolved how judges are to assess the validity of complex expert opinion beyond intuition or adversarial challenge.[141] Ward's critique is borne out in *Letby*. Although the Court of Appeal accepted that expert testimony must be 'sufficiently reliable to be admitted', it offered little guidance on what that requires in practice. Reliability was effectively reduced to professional experience and presentation, rather than methodological validity. Dr Evans's evidence was admitted despite concerns about his prolonged retirement from clinical practice, investigatory role and lack of peer-reviewed research, factors that might have prompted closer scrutiny under a structured reliability test. The *Letby* appeal thus illustrates how, in the absence of a clear threshold, reliability becomes a matter of judicial intuition rather than principled evaluation, reinforcing Ward's concern about inconsistency and epistemic fragility.

Concerns therefore persist about the adequacy and consistency of judicial scrutiny. As Ward argues, reliance on the undefined standard of 'sufficient reliability' leaves admissibility vulnerable to variations in judicial confidence and experience. Quick, similarly, notes the admission of evidence from experts with outdated or insufficiently grounded clinical knowledge, particularly in complex medical cases,[142] while the *Williams Review* highlights ongoing gaps in the regulation of expert witnesses in gross negligence manslaughter cases.[143] Taken together, these critiques point to a systemic problem: in the absence of a clearly articulated reliability threshold, or robust method for assessing methodological soundness, judicial discretion remains the primary, yet imperfect safeguard. Although the CrimPR and CPD incorporate elements of the Law Commission's proposals, they do not

139 Ministry of Justice (n 136 above) paras 4–5.

140 See Tony Ward, 'Expert evidence and the law commission: implementation without legislation?' (2013) Criminal Law Review 561 and Tony Ward, 'A new and more rigorous approach' to expert evidence in England and Wales? (2015) 19(4) International Journal of Evidence and Proof 228–245.

141 Ibid.

142 Oliver Quick, 'Expert evidence and medical manslaughter: vagueness in action' (2011) 38 Journal of Law and Society 496–518, 501.

143 Department of Health, 'Gross Negligence Manslaughter in Healthcare: The Report of a Rapid Policy Review' (June 2018).

remove judicial discretion; rather they reframe it. It is also important to recognise that even if Parliament had enacted the Law Commission's proposals, judges would still be required to interpret what constitutes 'sufficient reliability' and, as Edmond observes, 'reliability' is itself a contestable and discipline-specific concept and any threshold test necessarily depends on the epistemic assumptions judges bring to the evaluation of expert knowledge.[144] What appears to be a rule is, in practice, an interpretive exercise. The difficulty, then, lies not only in the absence of a clear standard, but in the lack of a sufficiently developed framework for interrogating the epistemic foundations of expert evidence. Without this, reliability risks becoming a flexible label rather than a substantive safeguard, leaving admissibility decisions vulnerable to inconsistency and deference. An enduring gap that underpins contemporary reform debates.

REFORM DEBATES AND COMPARATIVE MODELS

The concerns identified above have prompted sustained debate over whether the current adversarial framework is institutionally equipped to handle complex expert evidence or requires structural reform.[145] In response, we now move on to consider domestic and comparative proposals that seek either to strengthen existing safeguards or to reconfigure the role of expertise within the criminal process.

Court-appointed experts in complex cases (borrowing from inquisitorial models)

Roberts identifies a long-standing concern that adversarial procedure struggles with complex expert testimony.[146] Drawing on Hand's observation that juries cannot resolve disputes 'where doctors disagree',[147] later scholars, such as Kenny and Spencer advocate for inquisitorial-style reforms, particularly the use of court-appointed experts rather than party-instructed ones.[148] Civil law systems such

144 Gary Edmond, 'Is reliability sufficient? The Law Commission and expert evidence in international and interdisciplinary perspective (part 1)' (2012) 16 International Journal of Evidence and Proof 30.

145 Law Commission (n 8 above) paras 1.10–1.13; *R v Henderson* [2010] EWCA Crim 1269, [2010] 2 Cr App R 24, para 206; Roberts (n 6 above).

146 Roberts (n 6 above).

147 Hand (n 105 above); Roberts (n 6 above).

148 Anthony Kenny, 'The psychiatric expert in court' (1984) 14 Psychological Medicine 291–302; Anthony Kenny, 'The expert in court' (1983) 99 Law Quarterly Review 197; J R Spencer, 'Court experts and expert witnesses: have we a lesson to learn from the French?' (1992) 45 Current Legal Problems 213; Roberts (n 6 above).

as France and Germany rely on court-appointed neutral experts,[149] an approach that is well established across continental jurisdictions and increasingly reflected in English civil procedure, however, Roberts is rightly sceptical about its suitability for criminal trials.[150] Whilst judges technically retain a common law power to appoint their own experts, this is virtually never exercised,[151] and the key difficulty, as Roberts observes is structural: the benefits of court-appointed experts arise only if they replace, rather than supplement, party-instructed witnesses. Otherwise, the factfinder faces a confusing 'three-cornered' contest between experts for the prosecution, defence and court. While inquisitorial systems often appear to offer a cleaner institutional solution, by appointing experts directly for the court, comparative scholarship cautions against assuming that such models automatically deliver greater epistemic reliability or fairness. Empirical and doctrinal studies of continental practice suggest that court experts can themselves become entrenched, hierarchical actors whose authority is rarely subjected to meaningful challenge.[152] As Brants observes, the inquisitorial process in the Netherlands has not been immune from wrongful convictions arising from uncritical deference to officially appointed experts, whose findings may acquire quasi-official status.[153] McKillop likewise warns that the forensic science culture in inquisitorial jurisdictions can suffer from limited adversarial testing and institutional complacency.[154] Similarly, Vuille's analysis of Swiss and French systems highlights variability in how judges appraise scientific evidence, demonstrating that procedural form does not necessarily translate into substantive reliability.[155] These critiques suggest that court-appointed expertise risks substituting adversarial bias with institutional bias, a subtler but equally significant threat to evidential integrity. The comparative lesson, therefore, is one of epistemic humility: structural reform must guard not only against

149 Caroline Buisman, Christopher Gosnell and Karim Kha, *Principles of Evidence in International Criminal Justice* (Oxford University Press 2010) 639.

150 Roberts (n 6 above).

151 *R v Holden* (1838) 8 Car & P 606, 173 ER 638. 'The (notional) power to call experts is seemingly encompassed by the trial judge's general residual discretion to call any witness of fact in the interests of justice': *R v Roberts* (1985) 80 Cr App R 89, CA; *R v Cleghorn* [1967] 2 QB 584, CA: Roberts (n 6 above).

152 D Michael Risinger, 'Navigating expert reliability: are court appointed experts the solution?' (2000) 1 Jurimetrics 43.

153 Chrisje Brants, 'Wrongful convictions and inquisitorial process: the case of the Netherlands' (2012) 80 University of Cincinnati Law Review 1069–1114.

154 Bron McKillop, 'Forensic science in inquisitorial systems of criminal justice' (1995) 7 Current Issues in Criminal Justice 36.

155 Joëlle Vuille, 'Admissibility and appraisal of scientific evidence in Continental European criminal justice systems: past, present and future' (2013) 45 Australian Journal of Forensic Sciences 389.

partisanship, but also against over-reliance on the judiciary's preferred experts. As Roberts argues, displacing party control over expert evidence would undermine core adversarial principles and the accused's fair trial rights, particularly the right to challenge the prosecution's case through independent experts.[156] The imposition of a single court-appointed expert thus risks compromising both judicial neutrality and the appearance of fairness, especially where that expert's opinion bears directly on the ultimate issue. Therefore, we argue that wholesale adoption of court-appointed expertise is neither necessary nor desirable within the English criminal process. Rather than replacing adversarial structures, reform should instead focus on strengthening the reliability, accountability and epistemic transparency of expert evidence within the existing framework, including clearer admissibility standards, more rigorous scrutiny of methodological validity and enhanced institutional safeguards.

Accreditation and continuing practice requirements

Calls for accreditation, verification of qualifications and continuing practice requirements for expert witnesses revisit a long-standing concern within English criminal justice: how reliability might be secured through professional regulation and institutional accountability. The now-defunct Council for the Registration of Forensic Practitioners (CRFP), established in 1999 in the wake of miscarriages of justice such as *R v Ward*[157] and *R v Clark*,[158] was an early attempt to promote competence and quality assurance within forensic science. The CRFP maintained a voluntary register of accredited practitioners who were peer-assessed and required to demonstrate continuing professional development. However, participation was not mandatory and in the absence of statutory underpinning, secure funding, or consistent recognition by courts and investigators, the scheme ceased operations in 2009. Its collapse illustrates the fragility of reform efforts that rely primarily on professional self-regulation rather than enforceable standards. As Roberts argued, reliability 'thorough reform' cannot be secured by one-off initiatives but demands sustained institutional commitment and a culture of ongoing scrutiny and learning.[159] Recent scholarship confirms both the persistence and evolution of these concerns: Wilson-Kovacs highlights continuing resistance to accreditation even in technologically advanced fields such as digital

156 Roberts (n 6 above).

157 *R v Ward* [1993] 1 WLR 619 (CA).

158 *R v Clark* (Sally) [2003] EWCA Crim 1020, [2003] 2 FCR 447.

159 Paul Roberts, 'Making sense of forensic science evidence' in P Roberts and C Stockdale (eds), *Forensic Science Evidence and Expert Witness Testimony: Reliability Through Reform?* (Edward Elgar 2018).

forensics,[160] while Ward notes that the conceptual foundations of admissibility and reliability remain unstable despite decades of doctrinal and procedural development.[161] While institutional developments through the Forensic Science Regulator Act 2021 have placed the Forensic Science Regulator on a statutory footing, strengthening its ability to set and enforce quality standards in forensic science provision, its remit remains focused on forensic science providers and it does not create a comprehensive accreditation system for expert witnesses more broadly. The lessons of the CRFP remain salient: without clear statutory frameworks, sustainable resourcing and consistent judicial enforcement, accreditation risks becoming aspirational rather than operational.

Moreover, accreditation alone cannot resolve the deeper epistemic challenges identified in this article. As Roberts emphasises, the evaluation of expert evidence is not a passive process of 'receiving' scientific truth, but an interpretive exercise in which judges and juries construct meaning from competing claims.[162] Reliability is therefore not secured solely through credentials or compliance, but through the quality of reasoning, methodological transparency and the institutional conditions under which expertise is scrutinised. Ensuring the integrity of expert evidence requires not only regulatory reform, but more rigorous judicial engagement with the limits of expertise and the epistemic assumptions that underpin its use in criminal adjudication. Against this background, the case for reform is not whether accreditation is desirable, but how it can be implemented in a way that addresses both institutional and epistemic limitations. This article therefore argues that a more structured system of formal accreditation for expert witnesses should be introduced, coupled with continuing competence requirements designed to ensure that expertise remains current. However, such a regime must be carefully calibrated to avoid unintended exclusionary effects. In practice, the pool of suitably qualified experts in highly specialised fields is often limited and courts frequently rely on retired practitioners whose experiential knowledge may remain valuable despite reduced clinical engagement. The *Letby* case illustrates this tension: despite having been retired from clinical practice for over a decade, Dr Evans's evidence was nonetheless admitted on the basis of his experience and capacity to

160 Dana Wilson-Kovacs, 'The long journey of resistance toward acceptance: accreditation in digital forensics' (2024) WIREs Forensic Science e1501.

161 Tony Ward, 'Explaining and trusting expert evidence: what is a "sufficiently reliable scientific basis"?' (2020) 24 International Journal of Evidence and Proof 233–254.

162 Andrew Roberts, 'Drawing on expertise: legal decision-making and the reception of expert evidence' (2008) Criminal Law Review 443–462.

assist the jury. A rigid accreditation model risks exacerbating such shortages, particularly in complex medical cases. Accordingly, reform should adopt a flexible approach: accreditation should operate as a strong presumptive requirement, but not an absolute bar, with courts retaining discretion to admit non-accredited experts where justified, subject to heightened scrutiny of their competence and the currency of their expertise.

Clearer safeguards are also required to reinforce the independence of expert witnesses. In *Letby*, concerns regarding Dr Evans's involvement at an early stage of the investigation illustrated the risk of experts drifting from independent analysis into investigative roles. While early engagement with complex evidence may be unavoidable, procedural guidance should more clearly delineate permissible involvement and mandate transparency surrounding any pre-trial participation or conflicts of interest. These measures would enhance both the reliability and perceived neutrality of expert evidence, building on existing institutional frameworks, particularly the role of the Forensic Science Regulator and professional bodies, with oversight supported through the CrimPR and judicial case management. While resource implications cannot be ignored, accreditation would formalise and standardise practices that already exist in fragmented form, rather than introducing wholly novel obligations.

However, the significance of accreditation lies not merely in professional regulation, but in its capacity to recalibrate the epistemic foundations of expert evidence. By requiring greater transparency in qualifications, methodological validity and the currency of expertise, accreditation can operate as an initial filter against speculative or inadequately grounded opinion. Yet, as cases discussed in the second section above, illustrate, formal credentials alone cannot guarantee reliability or neutrality. The evaluation of expert evidence remains an interpretive exercise shaped by judicial assumptions, adversarial dynamics and institutional constraints. Accordingly, accreditation should be regarded as a necessary but insufficient reform, it facilitates more rigorous scrutiny without replacing it. Without parallel developments in admissibility standards and judicial engagement with scientific reasoning, there remains a risk that accreditation will function as a proxy for reliability, rather than a safeguard against its absence. The central challenge is thus not only to regulate who may testify as an expert, but to ensure that their evidence is subjected to substantive epistemic evaluation within the criminal process.

A pre-trial reliability hearing akin to a 'Daubert-lite' model.

While accreditation may strengthen the quality and accountability of expert witnesses, it does not resolve the more fundamental question of whether the evidence offered is sufficiently reliable to be admitted at all. The analysis in the second section of this article demonstrated that English law continues to rely heavily on adversarial testing and judicial discretion to evaluate reliability, often without structured engagement with the underlying methodology. This suggests the need for a more explicit mechanism for assessing reliability at the admissibility stage. Other jurisdictions have moved in this direction. In the United States, the *Daubert* standard requires judges to undertake a pre-trial assessment of scientific validity, including consideration of factors such as testability, peer review, error rates and general acceptance.[163] While often presented as a more rigorous model of judicial gatekeeping, comparative experience cautions against assuming *Daubert* has delivered a consistent or transformative improvement. Empirical studies indicate that its application has been uneven, particularly in criminal proceedings where courts have continued to admit questionable forensic evidence under the broad umbrella of judicial discretion.[164]

Importantly, the case for a more structured admissibility framework is not novel within English law. As noted earlier, the Law Commission in 2011 recommended the introduction of a statutory reliability test for expert evidence, requiring trial judges to determine, as a threshold matter, whether an expert's opinion was sufficiently reliable to be admitted.[165] The proposed framework identified a range of factors relevant to this assessment, including the soundness of the expert's methodology, the sufficiency of the underlying data and the extent to which the opinion was supported within the relevant field.[166] As

163 Following the judgment in *Daubert v Merrel Dow Pharmaceuticals* 509 US 579 (1993), r 702 (regarding the use of expert testimony) was subsequently amended.

164 Many US commentators have concluded that *Daubert* has made little practical difference to the conduct of litigation, especially in criminal cases: see eg Edward K Cheng and Albert Yoon, 'Does Frye or Daubert matter?: A study of scientific admissibility standards' (2005) 91 Virginia Law Review 471–513; D Michael Risinger, 'Goodbye to all that, or a fool's errand, by one of the fools: how I stopped worrying about court responses to handwriting identification (and "forensic science" in general) and learned to love misinterpretations of Kumho Tire v Carmichael' (2007) 43 Tulsa Law Review 447–476; Susan D Rozelle, 'Daubert, Schmaubert: criminal defendants and the short end of the science stick' (2007) 43 Tulsa Law Review 597–608; Craig Lee Montz, 'Trial judges as scientific gatekeepers after Daubert, Joiner, Kumho Tire, and amended rule 702: is anyone still seriously buying this?' (2001) 33 UWLA Law Review 87; Julie A Seaman, 'A tale of two Dauberts' (2013) 47 Georgia Law Review 889–922.

165 Law Commission (n 8 above) paras 3.25–3.30.

166 Ibid.

alluded to earlier, although these proposals were not implemented in legislation, aspects of their approach have been incorporated into the CrimPR and CPD 2023, albeit without creating a binding admissibility threshold.[167] The CrimPR (part 19) and the accompanying CPD require experts to disclose their qualifications, methodology, data sources and any limitations in their opinions.[168] In theory, these provisions enable both the opposing party and the judge to probe the evidential basis of an expert's conclusions before trial. In practice, however, their effect has been largely procedural rather than epistemic. The CrimPR compel disclosure, but they do not prescribe how methodological soundness is to be evaluated, nor do they provide judges with the scientific literacy to assess it. As Tony Ward has noted, the 'sufficient reliability' test remains conceptually underdeveloped without shared criteria for what reliability entails.[169] The result is a framework that promotes transparency but ultimately relies on adversarial engagement and therefore on the skill, confidence and resources of counsel to expose weaknesses in expert reasoning.

This structural dependence becomes particularly problematic where expert evidence is tested solely through cross-examination. *Letby* illustrates the limits of this model: in the absence of defence medical experts, the adversarial process lacked any meaningful counterweight to the prosecution's case, leaving the assessment of expert reliability dependent on advocacy rather than substantive scientific contestation. As the Law Commission observed in its 2011 report, conventional advocacy techniques are poorly suited to exposing methodological flaws in scientific reasoning: cross-examination may test consistency or credibility, but not the validity of complex scientific inferences.[170] Where only one voice is heard, the assumption that reliability emerges through contestation collapses entirely.

This difficulty is compounded by a broader epistemic tendency within the trial process. As Karen McGregor Richmond argues, there is a persistent risk that courts defer to expert authority rather than engage critically with the reasoning underlying expert claims.[171] In cases involving complex scientific evidence, this deference may stem from cognitive and institutional constraints, as judges and juries may lack the expertise or confidence to interrogate methodological assumptions. In such circumstances, the absence of a countervailing expert does not

167 CrimPR 2020, pt 19; CPD 2023, para 7.

168 CrimPR 19.2–19.4; CPD 19A.

169 See Ward (n 140 above) and Ward (n 61 above).

170 Law Commission (n 8 above) paras 1.14–1.22.

171 Karen McGregor Richmond, 'The influence of the expert witness in international criminal justice: deference or education?' (2025) 23 (3–4) Journal of International Criminal Justice 595–616.

merely weaken adversarial testing but reinforces a dynamic in which reliability risks being inferred from the authority of the witness, rather than demonstrated through rigorous scrutiny. Judicial gatekeeping can mitigate but not eliminate this imbalance. Without qualified counter-experts, even robust reliability standards cannot expose weaknesses in expert reasoning. Addressing this requires measures beyond evidential doctrine, such as state-funded expert assistance or a public register of independent experts, to enhance both fairness and the quality of judicial decision-making by ensuring that complex scientific disputes are properly ventilated before the court.

Against this background, we argue that the introduction of a pre-trial reliability hearing would operationalise the Law Commission's proposed test by requiring explicit judicial engagement with methodological validity before trial, rather than relying on diffuse in-trial assessment. A 'Daubert-lite' model should be understood not as a foreign transplant, but as a structured realisation of an existing domestic reform agenda. Crucially, such hearings should be targeted rather than routine, triggered in cases where expert evidence is central to the prosecution case, methodologically complex, or subject to genuine dispute. A reformed framework should therefore operate on two levels. Jurisprudentially, it should articulate clearer criteria for assessing methodological soundness, drawing on but not rigidly replicating factors associated with the *Daubert* standard, including testability, evidential basis, error rates and consistency with established scientific knowledge. Procedurally, it should provide a structured forum in which these issues can be examined in advance of trial, enabling more focused and informed adversarial challenge. However, as with accreditation, such reforms must be approached with epistemic caution. A formal reliability hearing cannot eliminate the interpretive dimension of expert evidence, nor substitute the need for judicial understanding of scientific reasoning, and risks reducing reliability to a checklist, or displacing deference onto the framework itself. Accordingly, the value of a 'Daubert-lite' model lies not in guaranteeing reliability, but in making its evaluation more transparent, structured and open to scrutiny. Combined with enhanced accreditation and safeguards on independence, it would contribute to a more coherent approach to expert evidence, giving practical effect to long-standing concerns about the limits of adversarial adjudication in scientifically complex cases.

Judicial training in scientific literacy

Greater emphasis must also be placed on strengthening judicial scrutiny of expert evidence. Yes, judges are legal generalists, not scientific experts, but as Richmond's analysis suggests, the role of the court should not be one of passive deference to expert authority, but of active engagement in which expert evidence serves an educative function.[172] This, however, implicitly requires a degree of scientific understanding. Without it, judges may lack the confidence or conceptual tools to interrogate methodological assumptions, assess the limits of expertise, or identify weaknesses in inferential reasoning, thereby reinforcing a tendency toward deference.

This need is particularly acute given that the CrimPR and CPD proceed on the assumption that adversarial testing will ordinarily expose weaknesses in expert evidence. In practice, however, adversarial testing alone may be insufficient to expose methodological flaws or properly interrogate the reliability of expert claims, particularly in cases involving complex scientific material. While enhanced judicial gatekeeping may raise concerns about inefficiency, overreach and the conflation of legal and scientific reasoning,[173] concerns that carry weight in a resource-constrained criminal process that must balance accuracy with finality, these risks must be weighed against the limitations of leaving reliability to advocacy alone. The critical question is whether judges are adequately equipped, through training and institutional support, to identify methodological weaknesses, recognise the limits of expertise and engage critically with expert evidence.

The reforms proposed here therefore seek to strengthen judicial capacity in this regard, ensuring that judges are better equipped to scrutinise expert evidence, without displacing the adversarial structure of the trial. The aim is to render reliability assessments more transparent, consistent and epistemically grounded through a combination of doctrinal clarification and procedural innovation. Two strands are central. First, judicial reasoning about scientific reliability should be more explicitly structured. The current CrimPR already identify admissibility criteria and factors relevant to reliability, but stop short of requiring judges to explain, in a systematic way, how those factors have been applied in individual cases. A modest but important reform would be to encourage brief reasoned rulings where admissibility is contested, identifying the factors that have informed the court's decision, including methodological soundness, peer review,

172 Ibid.

173 Paul Roberts and Adrian Zuckerman, *Criminal Evidence* 3rd edn (Oxford University Press 2022).

known error rates and the availability of alternative explanations. This would not eliminate discretion, but would make it more transparent, more reviewable and capable of generating a usable body of admissibility reasoning.

Secondly, there should be greater institutional support for the judiciary in undertaking epistemic evaluation, equipping them to engage more confidently with expert reasoning. This could include targeted judicial education in probabilistic reasoning, methodological validity and common inferential errors. More ambitious measures, such as access in appropriate cases to independent scientific assessors, would require careful design to avoid replicating the concerns already identified in relation to court-appointed expertise. The aim is not to substitute scientific judgement for legal judgement, but to enable judges to identify when expert evidence is methodologically fragile, overstated or insufficiently grounded. Taken together, these measures support a more integrated model of evidential regulation, recognising that reliability cannot be secured through adversarial contestation alone, nor reduced to rigid procedural rules. The aim is instead to foster structured scepticism: a mode of judicial engagement that does not require judges to become scientists but does require them to scrutinise expert evidence on more explicit, informed and reviewable terms.

CONCLUSION

Ultimately, the *Letby* case does more than revive long-standing concerns about expert evidence. It exposes a deeper structural problem: the absence of an adequate epistemic infrastructure within the criminal process to detect, interrogate and contextualise error. Importantly, this is not simply a case of flawed expert evidence being admitted unchecked. Rather, it illustrates the limits of a system that relies on adversarial testing as its primary safeguard of reliability. Although Letby's defence at trial subjected the prosecution's experts to extensive cross-examination, it did not call independent medical experts of its own. The result was not a balanced contest of competing expertise, but a contest of interpretation, in which the jury was required to evaluate complex medical opinion without the benefit of fully articulated alternative explanations. In this respect, *Letby* highlights the fragility of a framework in which contested scientific evidence may assume decisive weight in the absence of meaningful epistemic scrutiny.

The analysis in this article demonstrates that this vulnerability is systemic rather than exceptional. Although the common law and procedural rules provide a coherent formal structure, they do not adequately address the epistemic challenges posed by complex scientific and medical evidence. Admissibility remains permissive and the

evaluation of reliability is rarely undertaken in a structured or explicit manner. As a result, the effectiveness of adversarial testing continues to depend heavily on the resources, expertise and strategic choices of the parties. The reforms advanced here seek to strengthen, rather than displace the existing framework by introducing more structured reasoning on admissibility, a proportionate pre-trial mechanism for assessing reliability, clearer expectations around accreditation and continuing expertise and enhanced institutional support for judicial engagement with scientific evidence. Together, these measures aim to improve the transparency, consistency and rigour of evidential evaluation, while preserving the core features of the adversarial process.

The continued reliance on adversarial challenge and judicial intuition as the main safeguards of reliability reflects a nineteenth-century procedural logic that sits uneasily with twenty-first-century scientific complexity. Legislative inertia following the Law Commission's 2011 proposals has left English criminal law with a hybrid regime, part common law, part procedural directive, whose coherence depends largely on the variable confidence of individual judges. Comparative experience under *Daubert* further demonstrates that formal gatekeeping tests, without deeper cultural change, rarely transform practice. The real reform imperative therefore lies in cultivating what might be called epistemic literacy: a mode of judicial reasoning that is transparent about uncertainty, sceptical of expertise without being dismissive of it and institutionally supported by mechanisms for independent scrutiny. Reimagining reliability in this way is not simply a question of procedural refinement, but of constitutional integrity. A justice system that cannot adequately explain why it trusts expert evidence risks substituting authority for reason. Only by addressing these deeper epistemic challenges can the law maintain both its integrity as a truth-seeking institution and its moral authority to determine guilt and innocence.