

THE EMERGENCE OF SCIENCE IN ENGLISH COURTS AND THE IMPACT ON THE “ULTIMATE ISSUE RULE”

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Abstract

The purpose of this research is to trace the origins of and rationale for scientific expert witnesses in English criminal law and to elucidate their contemporary significance and reciprocal interaction with the “ultimate issue rule.” The authors explore the history of how the expert witness has become an intricate part of the English court system and how the expert witness’s specialized knowledge and qualifications strongly impact case outcomes. The research methodology employed is the case study approach, both instrumental and collective. The study provides an analysis of critical legal cases, both historical and contemporary, in which a miscarriage of justice hinged directly on scientific expert testimony. Furthermore, the cases are analyzed to determine the role of the ultimate issue rule upon the weight given to the scientific expert versus the level of responsibility placed on the jury in interpreting and comprehending complex scientific evidence. The results of the case study indicate that a myriad of psychological constructs heavily influence the jury’s interpretation of expert witness testimony, including various forms of bias and psychological anchoring; witnesses themselves are also susceptible to deficiencies in statistical reasoning and bias. The authors discuss the pros and cons of the ultimate issue rule, ultimately arguing that, as scientific evidence becomes more complex and the evidence underpinning the case outcome continues to evolve, justice might best be served by continuing to place the ultimate issue in the hands of the jury. Relaxing the ultimate issue rule is, therefore, untimely. The implications of the study are that novel scientific techniques are not always accurate, and the fear of questioning the validity of an expert witness causes many costly appeals. These inconsistencies, as well as the need for improving the reliability and admissibility of expert scientific evidence, are critical, especially where miscarriages of justice are concerned. Furthermore, evaluation is needed for reforms to improve the overall confidence the justice system must provide for public trust. Limitations of the study are that cases available are limited to those published cases, which are typically appeals cases, as the initial court case is typically not published in available databases. The cases selected are representative of a small slice of English criminal law.

Keywords: *Ultimate issue rule, evidence, English criminal law, expert witness, miscarriage of justice.*

1. Introduction

Expert witnesses have been used in criminal cases since the late 1600’s. It was not until a century later that a precedent was created for expert witnesses in *Folks v. Chadd* (1782). Lord Mansfield in his dictation of the case gave expert witnesses the first formal authority to express an opinion. It was held that: “In matters of science no other witnesses can be called... Therefore we are of the opinion that his judgement formed on facts, was very proper evidence.” (at 58). The case became a landmark in that it gave science the authority to assess the facts of the case apart from the law. Although previous cases had been assisted by expert evidence, the trial judge could have also easily excluded when complex facts were required to be interpreted. In *Folkes v. Chadd* the terms “science and faculty” were used. In contrast to the Latin origin of the term “science” being knowledge, it appears that the term referred to the practical aspects of proof, answers, and explanations. It can be assumed that the term “faculty” referred to a particular discipline.

The judicial precedent that had been created for expert witnesses gave them a new profound status of having special knowledge beyond the law. The law courts, however, were unwilling to give science too much power, and, thus, created the rules of evidence. The expert’s opinion was identified as

being invaluable in *Folkes v. Chadd*. Yet the admissibility rules maintained control of what the expert was allowed to say.

The presenting of sound evidence is critical and strongly influences the “ultimate issue rule”; moreover, what this rule means to the overwhelming responsibility the jury has on interpreting and comprehending such complex evidence. Traditionally, expert opinion evidence about the ultimate issues of a case was not admissible because it would undermine the jury process and constitute a trial by expert (*R v. Doheny*, 1997; *R v. Jefferies*, 1998; *R v. Stockwell*, 1993). The motivation behind the exclusionary rule is, then, the desire to prevent the judge or jury from being usurped in their roles. Another worry is preventing the fact-finder from being unduly swayed by an unreliable expert judgment on a vital topic that will determine the outcome of the case (Fennell, 2003; Tapper, 1999). Recent cases indicate, however, that this criterion is rapidly becoming seen as overly restrictive. In addition, courts have historically struggled to define what constitutes the ultimate issue. This confusion has resulted in various interpretations of the guideline. Consequently, it has been gradually abandoned or, with careful language, evaded in this jurisdiction, in accordance with trends in the United States, Australasia, and Canada, to the point where it may be regarded as nearly outdated.

The authors investigate the advantages and disadvantages the expert witness has on the English legal system. The study discusses the complexities of expert evidence and the critical role it plays in miscarriages of justice throughout the centuries. It further evaluates the need for reforms to improve the overall confidence our justice system must provide for our public. In essence, the study aims to clarify the historical relevance of scientific expert witnesses in English criminal law and their reciprocal relationship with the “ultimate issue rule.” The writers examine the development of the expert witness in English law courts and the significant influence that the expert's expertise may have on the result of a case.

2. Design: case study method

The research technique adopted is an instrumental and collective case study approach. The former is employed for purposes other than gaining knowledge of the specific legal circumstance; it offers understanding of a problem or aids in the development of a theory. The case is just incidentally interesting; it serves as a tool to help us comprehend something else. The situation could or might not be viewed as usual. As for the latter, collective case study research enables the researcher to investigate variations between and within instances. The objective is to duplicate results across scenarios. Because comparisons will be made, it is essential that the instances be properly selected so that the researcher can expect similar or contrasting findings (Crowe, 2011). This paper analyzes significant judicial examples, both historical and modern, in which scientific expert testimony directly contributed to a miscarriage of justice. In addition, the cases are studied to establish the impact of the ultimate issue rule on the weight accorded to the scientific expert versus the amount of juror accountability in evaluating and comprehending difficult scientific evidence.

3. Case analyses

Case examples are examined to support the findings that expert evidence is a key component in solving crimes; however, there is much more work to be done, considering that many scientific techniques, even by today's technological standards, are considered flawed. Novel scientific techniques do not mean that it is always incorrect, but the fear of questioning the validity of an expert witness causes many costly appeals. These inconsistencies, as well as the need for improving the reliability and admissibility of expert scientific evidence, are critical, especially when miscarriages of justice are concerned.

3.1. Unreliable expert testimony: The Birmingham Six

In the months between 1973 and 1974 several bombings took place in England. The IRA was blamed. Consequently, eighteen suspects were arrested and convicted for involvement in the bombings. Years later, however, all of the suspects had their convictions overturned on the grounds of unreliable expert evidence. The “Birmingham Six” was one of the parties convicted. The party proclaimed their innocence and placed appeals. After intense media coverage, the appeal was granted.

The “Birmingham Six” were convicted for the bombing in 1974 of two Birmingham pubs. The prosecution used scientific evidence that two of the defendants had been in contact with nitroglycerine (NG). Thus, the ultimate issue in the case hinged directly upon the NG evidence. The case was refused a leave to appeal in 1976. A controversial television program aired in 1985 which highlighted flaws with the evidence in the case and, in particular, the tests used by the expert witnesses. Scientists had

demonstrated that the forensic evidence was, at best, inaccurate, and in 1987, an appeals judge recognized that the identical results could have been acquired by testing anyone who had recently handled playing cards or cigarette paper. The case was then sent to the Court of Appeal by recommendation of the Home Secretary. Nevertheless, the Court stood by the decision of the jury at trial. It was not until 1990 that the conviction was quashed on the basis of inconsistencies in the convictions. It raises questions as to how unreliable condemning expert evidence was allowed into the courts (Birmingham Six Case, 1974-2002).

3.2. Unreliable expert testimony: *R v. Sally Clark*

The case of *R v. Sally Clark* showed that there was unreliable expert evidence that had led to Clark's conviction for murdering her sons. Christopher died at eleven weeks and Harry at eight weeks. Christopher's death at first instance was concluded to be a result of Sudden Infant Death Syndrome (SIDS). Similarities were found in both the children's deaths. After Harry's death, Clark and her husband, both solicitors, were arrested for the murder of their children. Only Clark was eventually charged with the murder. The prosecution's argument concerning the ultimate issue of murder entirely hinged on expert testimony that it was extraordinarily uncommon for two infants to die within the same family; hence, it was highly plausible that the defendant murdered her children (*R v Clark*, 2000; *R v Clark*, 2003).

3.3. Unreliable scientific evidence: *R v Luttrell*

In the case of *R v Luttrell*, the expert was a well-educated deaf woman who read lips all her life; therefore, the expert witness evidence was deemed reliable and admissible. The case involved the theft of high value computer equipment. The expert translated the name of the perpetrator and the word "computer" from CCTV footage. On appeal, the admissibility was upheld and likened to the inherently flawed "facial mapping" techniques. The court reasoned that the expert opinion was one factor among many that weighed upon a jury's mind. Again, this reinforces the analysis that scientific techniques have their flaws, and the methodology is a key factor to consider if it is to be reliable and admissible in court (*R v. Luttrell*, 2004).

3.4. Admissibility of psychological expert testimony: *R v. Turner*

The leading case of *R v. Turner* (1975) governs the admissibility of psychological evidence. The defendant Turner was convicted of murder after having struck a girl repeatedly with a hammer whilst in his car. Turner pleaded provocation; however his conviction was overruled. Turner later appealed on the grounds that the judge had disallowed expert evidence from a psychiatrist to support his defense of provocation. The defense was based on the fact that Turner had been dating the girl and she admitted that whilst he was in prison, she had slept with several other men and had become pregnant. Turner argued that this was the catalyst that had provoked him to commit the crime (*R v. Turner*, 1975).

The defense called a psychiatrist to give evidence on Turner's personality and mental state. The psychologist stated that Turner was susceptible to being provoked. It was held, however, that the defendant did not have a mental illness (Mental Health Act, 1959). Therefore, the evidence was inadmissible and irrelevant. The grounds for refusing expert evidence were that the jury was quite capable of assessing normal emotions (see *R v. Chard*, 1971) and feelings and was, therefore, within the scope of the jury's experiences (Reece, 1998). The main issue in the Turner case was the protection of the jury to allow them to be able to hold the position as triers of fact. Lawton, L.J. argued that:

"... because it is unnecessary...Jurors do not need psychiatrists to tell them how ordinary folk who are not suffering from any mental illness are likely to react to the stresses and strains of life" (Redmayne, 2001).

Although Turner is the recognized case on psychological evidence, the principle is not new. In the earlier case of *R v. Chard* (1971) it was also held that psychological evidence was not admissible to assess a normal person's state of mind. Roskil, L.J. clarified this:

"... the admissibility of expert evidence, that it is not permissible to call a witness, whatever his personal experience, merely to tell the jury how he thinks an accused man's minds – assumedly a normal mind – operated at the time of an alleged crime." (*R v. Chard*, 1971).

Psychiatric evidence is a controversial area when considering expert evidence. The vast majority of rules on the admissibility of expert evidence are based on psychological evidence. This is because expert evidence before the last ten years was mainly psychological. The admissibility of psychological

expert evidence can have different consequences depending on who is involved. The courts are more inclined to admit psychological evidence when it concerns children or people with intellectual impairments. The courts are also likely to admit psychological evidence when it is regarding issues that the court is unable to determine.

3.5. Experts' novel techniques: *R. v. Gray*

In the case of *R v. Gray* in 2003, the Court of Appeal was concerned with the admission of facial mapping techniques or imaging evidence. An armed robbery at a Lloyds bank was the subject of the investigation. The thief displayed partial facial traits during the crime, which were captured by a CCTV camera. Police arrested a man driving a car that fit the description given by witnesses. The defendant denied that the image taken of him on CCTV was his. Witnesses were unable to pick the defendant out of a line-up. The Crown Prosecution Service hired Mr. Harrow, a specialist in imaging processing, who utilized a technique during the trial to compare the defendant's traits to those captured by security cameras. Mr. Harrow testified to a number of traits in both the defendant and the CCTV footage that matched. Individual features between the photographs were also detected by the expert. High elevated eyebrows, pronounced nose, lip chin fold, and the pronounced size of the lower ear lobe were among the characteristics. The jury was given the opportunity to compare the defendant in person with the CCTV footage. The Crown's case rested upon five pillars, one of which was the testimony given by Mr. Harrow. The jury found the defendant guilty (*R v Gray*, 2003).

Mr. Harrow's testimony was challenged on appeal. It was asserted in the appeal that Mr. Harrow had not mentioned that the method was based on any mathematical formula, that it was part of a national database, or that it was based on probabilities. Simply drawing this conclusion leads one to believe that the courts considered the lack of a scientific approach in facial mapping techniques to be the most significant factor in determining that the expert testimony was not reliable. Because there was no scientific process to follow, the court argued that face mapping should only be considered a subjective view because of this. It was emphasized that even though the opinions of experts can be considered, they should nevertheless be viewed with some degree of skepticism. In addition, Mr. Harrow was also found to have provided untrustworthy expert testimony on the facial mapping approach on multiple other court cases in which he was hired by the Crown. Mr. Harrow's expert testimony was therefore deemed untrustworthy. The appeal judge noted that these earlier incidents of the expert delivering untrustworthy evidence should have been highlighted in previous cases. The fact that untrustworthy expert evidence was admitted in a number of subsequent trials implies a breakdown in communication among the courts. While the courts are evaluating other admission requirements, it is critical that they also investigate the expert witness' previous background and reputation (*R v Gray*, 2003).

4. Results and discussion

This paper presents a number of wrongful criminal convictions that directly hinge on expert testimony. The case study's findings suggest that the jury's perception of expert witness testimony is significantly influenced by several psychological characteristics, such as different types of prejudice; witnesses are also vulnerable to weaknesses in statistical reasoning and bias. With the complexity of scientific evidence and the ever-changing nature of the case's supporting evidence, it may be in the greatest interest of justice to continue to leave the ultimate question in the hands of the jury. The ultimate issue rule should not be loosened at this time. The study's findings suggest that innovative scientific procedures are not always reliable, and that the reluctance to cast doubt on the credibility of an expert witness leads to many, expensive appeals. In the case of miscarriages of justice, these discrepancies and the need to enhance the trustworthiness and admissibility of expert scientific testimony are of the utmost importance. The public's faith in the judicial system depends on it, thus any proposed changes must be thoroughly evaluated. Since the original court case is not often recorded in public databases, the analysis is confined to the published cases, which are typically appeals cases. Only a limited subset of English criminal law is reflected in the chosen examples.

5. Conclusion

Overall, the paper's argument effectively explains the advantages and disadvantages of having expert evidence in the courts. The expert is necessary in certain cases to educate the jury so that they can make a conviction or acquittal through understanding the evidence of the case. What has been established is the necessity to provide careful instructions for the jury at all times as society plays a key role in the outcomes of cases due to the very sensitive nature of these cases. The limitations are that scientific techniques, such as DNA and fingerprinting, have been introduced in the courtroom in the early 1980's,

as well earlier influences which have helped our courts to solve many crimes but still there are many other techniques that are not widely accepted. There are other technologies that need to be more tightly controlled where the methodology should be the focus not the expert witness. The expert witness needs to answer to a higher standard order to ensure the reliability of the evidence. Moreover, the reliability of expert evidence stems from the competence of the expert witness. At present, the current English law recognizes that the expert witness is competent if he or she has sufficient knowledge of the evidence gained from either qualification and/or experience. These two requirements are not sufficient in controlling the reliability of the expert witness with the increase of scientific evidence. Relaxing, disregarding, abandoned or evaded during a time period when technology is rapidly advancing and methodologies may not be adequately vetted for the jury.

References

- Birmingham Six Case, (1974-2002). Records of Chris Mullin MP. Hull University Archives, Hull History Centre. GB 50 U DMU/5/1
- Crowe et al. (2011). *BMC Medical Research Methodology* 2011, 11:100
<http://www.biomedcentral.com/1471-2288/11/100>
- Fennell, C. (2003). *The Law of Evidence* (2nd ed LexisNexis Butterworths 2003) at 168.
- Folkes v. Chadd* (1782). 3 Doug. 157, 99 ER 58.
- Jones, C. (1994). *Expert Witnesses: Science, Medicine and the Practice of Law*, Clarendon Press.
- R v. Chard* (1971). 56 Cr App R 268
- R v. Doheny* (1997). 2 All ER 155.
- R v. Jefferies* (1998). 2 All ER 155.
- R v. Luttrell* (Gerrard Francis), (2004). EWCA Crim 1344; [2004] 2 Cr. App. R. 31 (CA (Crim Div)).
- R v. Paul Edward Gray* (2003). E.W.C.A. Crim. 1001.
- R v. Sally Clark* (2003). EWCA Crim 1020.
- R v. Stockwell* (1993). 97 Crim App R 260.
- R v. Turner* (1975). 1 QB 835.
- R. v. Sally Clark* (2000). EWCA Crim 54 (2nd October, 2000) .
- Redmayne, M. (2001). *Expert Evidence and the Criminal Justice*, Oxford University Press.
- Reece, H. (1998). *Law and Science: Current Legal Issues*, Volume 1, Oxford University Press.
- Tapper, C. (1999). *Cross on Evidence*, 9th Edition, Butterworths, London.