Filtering Unreliable Expert Evidence: The Myth of Trial Safeguards

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Abstract

The adversarial system has long relied on various trial safeguards which in theory would ensure a fair trial is given to an accused. When dealing with prosecution expert evidence, an accused is given two basic rights to challenge the evidence by way of cross-examination and calling rebuttal expert evidence. This paper highlights that these two basic rights given may not be effective to filter unreliable expert evidence especially when dealing with complex forensic evidence like DNA evidence.

Keywords

Expert Evidence, DNA Evidence, Trial Safeguards, Malaysia

I. INTRODUCTION

The adversarial trial system provides various safeguards to ensure a fair trial to an accused. One of the safeguards is the existence of rules of evidence which are designed to ensure that only admissible evidence that explains the existence of a fact in issue or other facts relevant to the case can be presented and considered during trials.[1] These facts can be proven through the testimony of a witness who has personal knowledge of that fact or has perceived it with one of his or her five senses.[2] In other words, an opinion of a third person who was not directly privy to the fact is not admissible. An opinion given by experts is the exception to this rule.[3] Circumstances may happen where a court needs to seek expert evidence on matters which are outside its knowledge and experience to assist it in making inferences from observed facts or to identify facts which may be obscure or invisible to lay persons.[4] The common law has developed a specific admissibility rule before expert evidence can be admitted. In the Malaysian context, this rule is stipulated under s 45 of Evidence Act 1950 which states:

> (1) When the court has to form an opinion upon a point of foreign law or of science or art, or as to identity or genuineness of handwriting or finger impressions, the opinions upon that point of persons specially skilled in that

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[1] Colin Tapper, *Cross & Tapper on Evidence* (10th edn, Butterworths 2004) 29-31, 80-81. See also Evidence Act 1950 (Malaysia), s 5; Augustine Paul, *Evidence Practice and Procedure* (3rd, Malayan Law Journal 2003) 27-30.

[2] Tapper, (n 1) 60.

[3] ibid.

[4] Hodge M Malek (ed), *Phipson on Evidence* (18th edn, Sweet & Maxwell 2013) para 33-10.

foreign law, science or art, or in questions as to identity or genuineness of handwriting or finger impressions, are relevant facts.

(2) Such persons are called experts.

If one look closely to the above provisions, there are only two requirements that need to be satisfied before expert evidence can be admitted.[5] First, the evidence must be outside the experience and knowledge of a judge, making it necessary for the court to seek the assistance of an expert to form a correct judgment. This test is similar to the "assistance test" or the "Turner test" adopted by courts in England and Wales.[6] Secondly, the persons who give the opinion must have special skills which make them experts. This second test is similar to the "relevant expertise test" that applies in England and Wales.[7] Thus, there is no need for a party in a legal proceeding to prove the evidentiary reliability in order to admit expert evidence in Malaysia.

It is important to note that other common law jurisdictions have included the above requirement before expert evidence can be admitted.[8] In England and Wales, this requirement has been formally included in Part 19A of Criminal Practice Directions 2015 (CPD), in particular, Parts 19A.4, 19A.5 and 19A.6 following the recommendation made by the Law Commission in 2011 and the Court of Appeal's decision in *R v Dlugosz and Others* which emphasised that a court must be satisfied that there is a sufficiently reliable scientific basis before an expert evidence can be admitted.[9] The main purpose of this condition is to prevent unreliable expert evidence from being admitted and considered during trials. The inclusion of this condition was influenced by a development in the United States, notably through the significant Supreme Court decision in *Daubert v Merrell Dow Pharmaceuticals, Inc*.[10] There are several legal principles developed from this case. First, the Court provided a non-exhaustive check-list when assessing the reliability of expert evidence which includes: (1) whether the technique has been tested (referring to Karl Popper's concept of falsifiability, refutability, or testability); (2) whether the theory or technique has been subjected to peer-review; (3) the known and potential of error rate; and (4) general acceptance of the relevant scientific community and an express determination of a particular degree of acceptance within that community.[11] Secondly, a judge will act as a gatekeeper and has a broad discretion to prevent unreliable evidence from being admitted.[12] Thirdly, the reliability requirement in the context of scientific evidence applies to existing scientific evidence as well as to novel scientific evidence.[13] In *Kumho Tire Ltd v Patrick Carmichael*, the United States' Supreme Court clarified that the principles developed from *Daubert* apply not only to testimony based on scientific evidence but also to non-scientific expert evidence.[14]

It is desirable for Malaysia to include the evidentiary reliability as a condition before expert evidence can be admissible. The inclusion will update the position in Malaysia with new development in other jurisdictions. However, as explained earlier, until today, the

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[5] See also *Junaidi Bin Abdullah v Public Prosecutor* [1993] 3 MLJ 217 (Supreme Court) 229.

[6] The test is derived from the case of *R v Turner* [1975] All ER 70 (CA) 74.

[7] See Law Commission, Expert Evidence in Criminal Proceedings in England and Wales (Law Com No 325, 2011) para [2.6].

[8] See Law Commission, Evidence Volume 2: Evidence Code and Commentary (NZLC R55, 1999) 59; *R v Calder Christchurch* T154/9, 12 April 1995 (High Court) 3-4; *R v Trochym* [2007] 1 SCR 239 (Supreme Court) [31]-[37]; *R v Bonython* [1984] 38 SASR 45 (South Australia Supreme Court) 47.

[9] Law Commission, Expert Evidence in Criminal Proceedings in England and Wales (n 7) pt 5; *R v Dlugosz and Others* [2013] EWCA Crim 2, [2013] 1 Cr App R 32 [11].

[10] *Daubert v Merrell Dow Pharmaceuticals, Inc* 509 US 579 (1993) 593-594. See also Committee on Identifying the Needs of the Forensic Science Community, National Research Council *Strengthening Forensic Science in The United States: A Path Forward* (National Academic Press 2009) 88-95 for a brief discussion of the historical development of the admissibility rule for expert evidence in the United States.

[11] *Daubert* (n 10) 593-594.

[12] ibid 595-597. See also *General Electric Co Et Al v Joiner Et Ux* 522 US 136 (1997) 141-147.

[13] *Daubert* (n 10) 597. See also Ian Freckelton and Hugh Selby, *Expert Evidence: Law, Practice, Procedure and Advocacy* (5th edn, Thomson Reuters (Professional) 2013) 73.

[14] Kumho Tire Ltd v Patrick Carmichael 143 L Ed 2d 238 (1999) 246.

requirements for the admissibility of expert evidence in Malaysia as stipulated in s 45 of the Evidence Act 1950 remains unchanged. It can be argued that such an inclusion may not be necessary in Malaysia because almost all types of scientific evidence that are currently being used in its criminal justice process were developed or discovered by the western countries. By the time such type of evidence was introduced in Malaysia, they had already been admitted in other jurisdictions and the issue of their reliability had been resolved.[15] For example, in *Pathmanabhan a/l Nalliannen v Public Prosecutor and other appeals*, the Federal Court which is the apex court in Malaysia explained that DNA evidence is reliable and admissible by citing two English cases, *R v Doheny and Adams* and *R v Broughton*.[16] These two cases were dealing with the issue of reliability of two different techniques of DNA analysis. *Doheny and Adams* was concerned with a technique commonly used in DNA analysis known as Polymerase Chain Reaction (PCR) which analyses the Short Tandem Repeats (STR) in a DNA, whereas, *Broughton* was dealing with Low Template DNA (LTDNA) analysis.[17] However, it must be noted that these cases merely indicated a general acceptance by the English courts on reliability of both techniques used for DNA analysis but not a general statement that DNA evidence should be accepted or deems reliable in every individual case without a sufficient assessment made by a trial judge.[18]

Besides that, it can also be argued that the non-inclusion of the reliability requirement is not an issue of concern because challenges as to the reliability of an expert evidence can be made by utilising the two rights given to the defence during a trial which are the right to cross-examining the expert witness and the right to call rebuttal expert evidence.[19] The Malaysian courts also have long recognised these two rights as a mechanism in challenging expert evidence during trials.[20] However, a question arises whether these two trial safeguards are sufficient to filter out unreliable expert evidence? According to Gary Edmond, there are few empirical studies supporting that contention and in practice their effectiveness are just possibilities.[21] Based on these backgrounds, this paper highlights that these two trial safeguards are not effective tools to assess the reliability of expert evidence by highlighting the reality of their application in Malaysia when dealing with the admissibility of DNA evidence. The part following this introduction focuses on the right to cross-examination where its effectiveness depends on the extra knowledge of the defence lawyers to deal with expert witnesses who testify in courts. The next part then explores the right of the defence to call rebuttal expert witnesses. Although this right is well recognised in the adversarial trial system, there are more than meet the eye before it can be utilised by the defence in criminal trials.

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[15] See also Gary Edmond and others, 'Admissibility Compared: The Reception of Incriminating Expert Evidence (i.e., Forensic Science) in Four Adversarial Jurisdictions' (2013) 3 University of Denver Criminal Law Review 31, 102-103. Legal practice in foreign countries often influences the local rules on admissibility of particular expert evidence. Once the evidence has been admitted elsewhere, it provides strong support to also admit the evidence.

[16] Pathmanabhan a/l Nalliannen v Public Prosecutor and other appeals [2017] 3 MLJ 141 (Federal Court) [140].

[17] *R v Doheny and Adams* [1996] EWCA Crim 728, [1997] 1 Cr App R 369; *R v Broughton* [2010] EWCA Crim 549.

[18] See Salim Farrar and Mohd Munzil Muhamad, 'Reliability and reform of expert evidence in Malaysia's developmental state: putting the cart before the horse?' in Paul Roberts and Michael Stockdale (eds), *Forensic Science Evidence and Expert Witness Testimony* (Edward Elgar Publishing) 2018) 347.

[19] See Gary Edmond, 'Actual innocents? Legal limitations and their implications for forensic science and medicine' (2011) 43 *Australian Journal of Forensic Sciences* 177, 184-185.

[20] See *Munusamy v Public Prosecutor* [1987] 1 MLJ 492 (Supreme Court) 496.

[21] See Gary Edmond, 'Impartiality, efficiency or reliability? A critical response to expert evidence law and procedure in Australia' (2010) 42 *Australian Journal of Forensic Sciences* 83, 89; see also Dawn McQuiston-Surrett and Michael J Saks, 'The Testimony of Forensic Identification Science: What Expert Witnesses Say and What Factfinders Hear' (2009) 33 *Law and Human Behavior* 436, 439.

II. INEFFECTIVENESS OF CROSS-EXAMINATION

According to John Henry Wigmore, cross-examination is regarded as 'the greatest legal engine ever invented for the discovery of truth'.[22] Cross-examination is also regarded as the most valuable tool to assess the veracity of witnesses in courts.[23] It not only helps to test the truthfulness of what have been said by witnesses but also could reduce the danger of a trial judge in making a false conclusion.[24] However, many studies have revealed that the effectiveness of cross-examination may be reduced when dealing with expert testimony. Cross-examination is not an effective tool to assess the strengths and weaknesses of expert evidence or to expose any methodological weakness, exaggeration or fraud.[25] For instance, lack of knowledge among lawyers in the area of expertise possessed by expert witnesses will restrict their ability to conduct effective cross-examination.[26] As a result, the lawyers will end up conducting cross-examination in a manner similar to when they challenged lay witness testimony.[27] In the Malaysian context, this is something not uncommon. For example, in the case of *Public Prosecutor v Muhammad Rasid bin Hashim*, the learned High Court Judge explained that when there was no serious challenge made by the defence on the method used in the DNA analysis conducted by the prosecution expert witness, the evidence must be accepted by the Court.[28]

It is also important to note that cross-examination would be a less effective tool to assess reliability of expert evidence when lawyers are facing with highly trained expert witnesses, especially those who have previously experienced giving testimony in courts. They are normally better prepared against cross-examination, often resilient in the witness box and able to portray themselves as impartial witnesses even when giving speculative opinion.[29] As a result, the details of what really happened during the analysis process may not be fully disclosed during trial.

For example, in the infamous *Sodomy II trial* that involved Dato' Seri Anwar Bin Ibrahim, the former Deputy Prime Minister of Malaysia, the defence argued that the evidence samples were subjected to contamination and degradation which put the accuracy of the DNA analysis in doubt. Responding to this challenge, the first prosecution expert witness who examined the samples taken from the victim's anus testified that degradation will always happen in DNA examination and analysis. She stressed that the main issue was whether the degradation was so severe as to cause the entire DNA to be destroyed so that no profile could be obtained or developed from the analysis. Since the DNA profile was developed from the samples, it meant the degradation, if it happened, was not substantial and had no effect on the quality of the DNA profile developed from the samples.[30]

On the other hand, the second prosecution expert when challenged by the defence on the same issue stressed that there was no contamination during the DNA analysis

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[22] John Henry Wigmore, A Treatise on the Anglo-American System of Evidence in Trials at Common Law: Including the Statutes and Judicial Decisions of All Jurisdictions of the United States and Canada, vol 5 (3rd edn, Little Brown & Co 1940) § 1367, 29.
[23] See Lirieka Meintjes-Van Der Walt, 'Expert Evidence and the Right to Fair Trial: A Comparative Perspective' (2001) 17 *South African Journal on Human Rights* 301, 314.
[24] See *Public Prosecutor v Wong Yee Sen & Ors* [1990] 1 MLJ 187 (High Court) 189.
[25] See Gary Edmond and Mehera San Roque, 'The Cool Crucible: Forensic Science and the Frailty of the Criminal Trial' (2012) 24 Current Issues in Criminal Justice 51, 55; and McQuiston-Surrett and Saks, (n 21) 439.
[26] Meintjes-Van Der Walt, (n 23) 315.
[27] ibid; see also Gary Edmond and Andrew Roberts, 'Procedural Fairness, the Criminal Trial and Forensic Science and Medicine' (2011) 33 *Sydney Law Review* 358, 367. Lawyers frequently focus their attention upon the chain of custody and conflict of interest rather than more substantial methodological and interpretive issues.
[28] Public Prosecutor v Muhammad Rasid bin Hashim [2011] 7 MLJ 845 (High Court) [46].
[29] See Edmond and San Roque, (n 25) 56. cf Meintjes-Van Der Walt, (n 23) 317. Sometimes, the cross-examiner's control over the expert witness may also have a distorting effect on the witness testimony as the questions are often framed by lawyers to limit the possible responses of witnesses. This circumstance may deny the expert witnesses the opportunity to furnish the court with the full extent of their expertise and at the same time deny the court the opportunity to hear the truth.
[30] *PP v Dato' Seri Anwar Ibrahim* [2012] 4 MLRH 6 (High Court) [179].

because the reagent blank, a method used to detect contamination in DNA analysis, remained blank throughout the analysis.[31] A trial judge who observes this kind of testimony would be easily impressed and find the expert witness credible because this witness remains unshaken when examined by the defence counsel. However, in reality, the issue whether the contamination did occur, or the reagent blank indeed remained blank as claimed by the experts can never be verified because the defence in Malaysia is not supplied with all materials related to DNA analysis including the samples which have been subjected to DNA testing. There is no opportunity given for the defence to conduct independent testing on whatever forensic evidence which would be used by the prosecution during trials. Section 51A of the Malaysian Criminal Procedure Code (CPC) which was introduced in 2006 and regarded as the significant leap of the pre-trial disclosure in Malaysia does not provide the right for the defence to access forensic samples and conduct testing on behalf of the defence. The Federal Court and the Court of Appeal when dealing with the pre-trial application in the *Sodomy II trial* explained that the wording of s 51A(1)(b) of CPC which requires the prosecution to disclose to the accused all evidence they would be tendering during a trial referred only to documents.[32] Thus, any forensic samples which have been analysed by a prosecution expert witness do not fall under the category since they are not regarded as documents.

III. ABILITY TO CALL REBUTTAL EXPERT WITNESSES

The adversarial trial system provides the opportunity for each party in a trial to call witnesses to challenge the evidence or the narrative put forward by the opposite party. For example, if the prosecution calls expert evidence to support its case, the defence may also wish to call a rebuttal expert evidence. However, the right of each party to call expert witnesses during a trial is meaningful only if each party has the same ability to do so. The state, which has many resources, can easily employ expert witnesses,[33] but not every accused can afford to hire an expert witness to testify on their behalf despite having the right to do so.[34] In the Malaysian context, the prosecution would normally call government expert witnesses from the Department of Chemistry Malaysia and the Royal Malaysia Police Forensic Laboratory which are two forensic service providers in Malaysia.[35] Thus, there will be no cost involved to them. On the other hand, calling a rebuttal expert evidence would definitely increase the cost for the defence. In my view, for an indigent accused, the right to call rebuttal expert witness is actually an illusory right.

Some jurisdictions like England and Wales, and New Zealand provide funding to an indigent accused to hire an expert witness as part of the legal aid programme. This assistance is normally given in exceptional cases where the interests of justice require it.[36] Unfortunately, the current legal aid programme in Malaysia does not offer much funding to allow for the appointment of expert witnesses to assist the defence case. The fund

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[31] ibid [181]. The second expert witness was responsible for analysing the accused's samples taken without his consent from several items used by the accused during his one night in police custody.

[32] Public Prosecutor v Dato' Seri Anwar bin Ibrahim [2010] 2 MLJ 353 (Court of Appeal) [59]; Dato' Seri Anwar bin Ibrahim v Public Prosecutor [2010] 2 MLJ 312 (Federal Court) [46]-[59].

[33] See Edmond, (n 19) 185; and Edmond and Roberts, (n 27) 384.

[34] See Meintjes-Van Der Walt, (n 23) 309.

[35] See 'Forensic Science Analyse Centre' (*Department of Chemistry Malaysia*) <https://www.kimia.gov.my/en/center-of-analysis-for-forensic-science/> accessed 17 September 2021; 'PDRM Forensic Lab will be empowered — Bukit Aman' *The Sun Daily* (Petaling Jaya, 30 June 2021) < https://www.thesundaily.my/local/pdrm-forensic-lab-will-be-empowered-bukit-aman-FG8019667> accessed 17 September 2021.

[36] See Ministry of Justice, New Zealand, *Legal Services Grant Handbook* (2021) 106. See also The Criminal Legal Aid (Remuneration) (Amendment) Regulations 2013, sch 1; *R v Reed and Reed* [2010] 1 Cr App R 23, [9]; *Wallace v The Queen* [2010] NZCA 46, [35].

provided is miniscule and is mainly intended to enable the accused to appoint a lawyer to represent him or her during trial.[37]

In addition, even if an accused has the financial capability to hire an expert witness, locating the appropriate expert witness is an obstacle.[38] For example, in a small jurisdiction where forensic services are only provided by government experts, there is a possibility that no other expert witnesses would be available to represent the accused. As a result, an accused who wishes to be assisted by an expert witness during the trial would be left with no option but to hire an expert witness from overseas. However, hiring expert witnesses from overseas would incur an even greater cost.[39] This cost factor would again deny a less-resourced accused the benefit of hiring experts.

Although there may be some private laboratories which conduct DNA analysis, such as for the purpose of paternity testing in civil cases, experts from these laboratories may lack forensic and investigative experience compared to the prosecution experts. For instance, non-forensic experts conduct DNA analysis in a controlled environment where samples used for the analysis are normally in pristine condition compared to the challenging samples collected from crime scenes.[40] Due to the different nature of their work, non-forensic experts often fail to fulfil a symmetrical role during trial.[41] For example, challenges made by non-forensic experts on methodological issues may carry little impact in trials as it would not be sufficient to rebut forensic scientists' evidence, especially when it is routinely admitted by the courts.[42] Thus, using this type of rebuttal expert evidence may not expose the frailties in the forensic analysis or may be unable to diminish the trust and confidence placed by courts in government expert witnesses. This was exactly happened to two expert witnesses called by the defence in the *Sodomy II trial* to challenge the DNA evidence presented by the prosecution. The Court of Appeal regarded them as "arm chair experts" and their opinions as based on their textbook knowledge.[43] The Court viewed their testimonies as unable to match the testimonies of prosecution expert witnesses who not only conducted the analyses but also had impeccable credentials.[44]

IV. CONCLUSION

The discussion in this paper has indicated that the two trial safeguards of the right to cross-examination and the right to call rebuttal expert evidence may not be effective to filter out or prevent unreliable expert evidence from being used in the Malaysian criminal justice process. Without denying the usefulness of expert evidence to the criminal justice process, all parties in the criminal justice process especially the courts must be extra vigilant when dealing with expert evidence. This is to avoid unreliable expert evidence from being part of evidence that would influence the courts in its final verdict. Perhaps, it is time for Malaysia to amend s 45 of the Evidence Act 1950 and include evidentiary reliability as one of the conditions before expert evidence can be admitted in courts. For this purpose,

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[37] See 'Program' (*Bar Council Legal Aid Centre (KL)*) <www.kllac.com/ybgk-program/> accessed 1 August 2021; and Bar Council Malaysia, 'Information Sheet-Malaysia' (3rd Conference on Access to Justice and the Role of Bar Associations and Law Societies in Asia, Tokyo, November 2011) 11-12.
[38] See Meintjes-Van Der Walt, (n 23) 313.
[39] See Rod Vaughan, 'How expert witnesses can make or break trials' (*Auckland District Law Society*, 8 October 2020) <adls.org.nz/Story?Action=View&Story_id=223> accessed 12 August 2021.
[40] See Michael Baird, 'DNA Testing: Is forensic DNA testing reliable? – Yes: A Valuable Tool' (1990) September *ABA Journal* 34, 34.
[41] Edmond, (n 19) 186.
[42] ibid. See also Elisabeth McDonald, *Principles of Evidence in Criminal Cases* (Brookers 2012) 296. The author criticises the approach taken by the New Zealand Court of Appeal in *Shepherd v R* [2011] NZCA 666 in admitting expert evidence on facial mapping. The Court assumed that the defence expert, who has "equal experience and skill" would ensure appropriate testing had been made by prosecution expert. However, the facts of that case show that the challenge made by defence expert was limited to a methodological critique.
[43] *PP v Dato' Seri Anwar Ibrahim* [2014] 4 CLJ 162 (Court of Appeal) [130]-[131], [137]. The Court commented that one of the expert witnesses last did DNA analysis in the lab in 2004 and his expertise seems to be limited to the interpretation of results of DNA analysis only.
[44] ibid [130].

provisions under Part 19A of the CPD 2015 as currently applies in England and Wales can be adopted as it provides detailed guidelines for the courts to determine the reliability of expert evidence.