Judicial College of Victoria

Scholarship for the Legal Community/
Detailed brief

Gary Edmond, 'Regulating Forensic Science and Medicine Evidence at Trial: It's Time for a Wall, a Gate and Some Gatekeeping', (2020) 94 *Australian Law Journal* 427

This article argues for the imposition of a formal reliability standard on the reception of forensic science and forensic medicine evidence in Australian criminal proceedings by revising interpretations of s 79 of the Uniform Evidence Law, as well as reconsidering the scope of ss 78 and 137.

Expert evidence is admitted to enhance the rectitude of decision-making and to reduce the risk of wrongful conviction, thereby sustaining legal institutional legitimacy. Reliance on expert evidence is directly contingent on the evidence having value and decision-makers being able to assess its value in the context of a case.

The article argues that s 79 should be revised to impose an explicit reliability standard. The *Dasreef* approach of reliance on witness qualifications and experience is an inadequate 'short cut', and reliance on the adversarial process and 'trial safeguards' is insufficient. Forensic science evidence cannot be rationally evaluated unless reliability is in focus. Australian courts should focus on 'demonstrable ability' as the most important indicia of expertise when considering the admission into criminal proceedings of opinions said to be expert, which should ordinarily be determined through validation studies or rigorous proficiency testing.

It is a fundamental expectation of our criminal justice processes that decision-makers understand forensic science evidence. The questions which ought to be asked include:

- Has the procedure been formally evaluated in conditions where the correct answer is known?
- Is the "expert" demonstrably proficient with that procedure?
- Is the opinion expressed in terms that are consistent with known abilities?
- Have dangers from cognitive bias (e.g., suggestion) been managed and disclosed?
- Is the accuracy sufficiently high to admit the opinion, given the range of risks and dangers, additional time and expense, and inconsistent institutional performances, associated with the admission of expert opinion evidence?

Opinions derived from procedures that are not valid and reliable, and persons who are not demonstrably proficient with reliable procedures, should not be admissible in criminal proceedings.

The bare opinions of those who are not demonstrably expert, particularly when the opinions are those of investigators and others engaged by the state, have no place in a rational system of criminal justice. Most procedures relied upon by forensic scientists and others can and should be tested. Trial judges must be given the power and responsibility to exclude forensic science evidence where it is not reliable, or its reliability is unknown.

The article criticises the admission – under the limited exception for lay opinion evidence in s 78 – of opinions of investigators which are treated as 'quasi-expert'. This article argues that s 78 should be restricted to direct sensory witnesses. It should not be used to admit the opinions of those listening and watching displaced by time or space (such as voice recognition opinions on intercepted sound recordings), as this undermines the regulatory function of s 79. Trial and appellate courts must be willing to deem opinion evidence generated by investigators and adduced by prosecutors inadmissible. If a witness is said to be expert (whether an ad hoc expert or 'quasi-expert'), the evidence should be regulated by s 79 and such witnesses should be required to demonstrate that the procedures they employ are valid, give an indication of the limitations, uncertainty and error associated with their procedure based on formal scientific evaluation, and provide independent evidence of their personal proficiency based on rigorous ground truth

testing. The legal reception of ad hoc (and other types of "expert") witnesses whose procedures and abilities have not been formally evaluated is inconsistent with scientific advice and the rational administration of justice and is likely to discourage research and attempts to develop and institute reliable procedures.

When undertaking the balancing exercise mandated by s 137, for scientific, technical, and medical evidence, trial judges should be able to consider the reliability of the evidence and the credibility of the witness as part of the probative value of the impugned evidence. Probative value ought not be contingent on other evidence or the strength of the case; only evidence that is directly related to the opinion, such as the procedure and the ability of the forensic practitioner, should be considered. The admissibility of forensic science and medicine evidence should stand or fall on its own.