

A DISCUSSION ON OPINION EVIDENCE FOR PRACTITIONERS

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This paper discusses expert opinion in dispute resolution and comments on procedures in the Commonwealth and in New South Wales. It briefly reviews science, opinion evidence and admissibility and some differences between science and law.

INTRODUCTION

Litigation can occur where negotiation, mediation or arbitration have failed to resolve a dispute. In the acoustics discipline disputes can arise about compliance with statutes, codes and by-laws in matters including property development, noise levels, noise annoyance, hearing conservation and hearing damage, acoustic measurements, and auditory discrimination. Professionals may include those who practise basic science, applied sciences in medicine, engineering, psychology, and technical disciplines.

The breadth of opinion evidence is covered in detail in the CCH Subscription Service for Expert Evidence [1]. Of particular interest to acousticians in this series is Chapter 114 on noise analysis by Barry Murray. This presentation to assist advocates and litigators includes fundamentals and definitions about sound and noise, measurement and physical characteristics. It describes environmental noise that includes construction, transportation and rural sources, with assessment and calculation procedures, and it includes reference to current Australian standards, as well as some state legislation.

Duly qualified experts are retained by lawyers for the parties to litigation and/or court appointed as required. The opinions presented in direct examination are subject to cross examination by the lawyer for the opposing party. For the Commonwealth and New South Wales, experts must have relevant specialised knowledge based on training, study or experience or a combination of all, and their evidence must be wholly or substantially based on that specialised knowledge (S.79 Uniform Evidence Act, Commonwealth & NSW 1995 [2]).

New rules for expert evidence and expert witnesses, detailed in Uniform Civil Procedure Rules (Amendment No.12), 2006 under the Civil Procedure Act, 2005 (NSW) were introduced 4 December 2006. These rules have broadened regulation controls for expert evidence, and include a new code of conduct for expert witnesses.

SCIENCE, OPINION EVIDENCE AND ADMISSIBILITY

A qualifier of “scientific” is not included in S.79 [2], but is implied under the term “specialised knowledge”. It is significant that Mason [3] indicated that “specialised knowledge” should be identified with precision and must have “scientific rigour” [4]. It is reasonable to conclude that “scientific rigour” implies “scientific method”, described by the American Association for the Advancement of Science in its *Amici Curiae* Brief to Daubert [5a], viz “A new theory or explanation must generally survive a period of testing, review, and refinement before achieving scientific acceptance. This process does not reflect the scientific method, it is the scientific method” [5b].

Additionally, “scientific” implies grounding in methods and procedures of science, more than belief or unsupported speculation. Indeed measurement is the basic tool in the application of scientific method. The concept of scientific method and admissibility of scientific evidence is embraced thus:

“Just when a scientific principle or discovery crosses the line between experimental and demonstrable stages is difficult to define. Somewhere in the twilight zone the evidential force of the principle must be recognised, and while the courts will go a long way in admitting expert testimony deduced from a well-recognised scientific principle or discovery the thing from which the deduction is made must be sufficiently established to have gained general acceptance in the particular field in which it belongs”. *Frye v. United States* [6].

This opinion recognises scientific principles, and its genius is to distinguish between the experimental (novel) stage of a theory or technique and the “demonstrative stage” where it will receive judicial recognition. It has been referred to with approval in Australian superior court cases, for example [7]. But the ‘general acceptance’ or field of expertise test is replaced by wide discretion of the courts to accept or reject evidence, whence the test under S.79 appears more liberal than the Frye test.

The Frye opinion dominated the admissibility of scientific evidence in the United States from 1923 until 1993 with the US Supreme Court judgement in the case Daubert, based on the US Federal Rule of Evidence 702 [8]. Daubert introduced a check list, meant to be helpful, not definitive, to provide a procedure to evaluate scientific evidence, viz: One, has the theory or technique been tested?; two, has it been subjected to peer review?; three, has the technique a potential rate of error?; and four, whether the theory or technique enjoy “general acceptance” within the relevant scientific community?

Even though Daubert is American case law, the opinion was significantly endorsed in two Canadian and two New Zealand cases, not cited. Indeed the Daubert opinion was an innovative step to equal the genius of Frye, in that it provides a pragmatic framework to establish validity and reliability in science, applied science and other specialised knowledge as judges exercise their gate-keeping responsibility. In contrast, for acoustics and engineering, Daubert type tests may be adequate for falsifiability, problems may be encountered in the ‘soft’ or social and behavioural sciences, where say Freudian theory is applied to disputes in psychology or psychiatry, and reliability is difficult to establish [9].

SCIENCE AND LAW

Briefly, in basic science, discrete variables and data are objectively quantified, analysed and directed to repeated demonstrability and predictions, not always successfully. Thus clear cut answers may sometimes not be possible from an evolving and collective process that results from the work of many scientists. Nevertheless aspects of applied science can be supported with degrees of certainty using demonstrability, probability or other evidence that establishes validity and reliability. However, courts seek to resolve disputes using the rules of evidence, which are designed for that purpose, and not to seek cosmic understanding [5a, p.597]. Indeed the gaps between science and law are a balance achieved within the discretion of the court system. Additionally, it is well recognised that bad science and junk science may be presented by expert witnesses, but shaky evidence is expected

to be successfully rejected by vigorous cross-examination.

In conclusion, the great jurist, Oliver Wendell Holmes is reported as saying “Certitude is not the test of certainty. We have been cocksure of many things that were not so”, [10]. “The best test of certainty we have is good science, the science of publication, replication and verification, the science of consensus and peer review.” [11].

Acknowledgment:

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1. CCH Subscription Service for Expert Evidence (Freckelton & Selby)
2. Uniform Evidence Act, S.79. (Commonwealth & NSW) (1995)
3. R v. G (1997). 42 NSW Law Report, 451 at 459.
4. Odgers, sc S J. (2006) “Uniform Evidence Law”. 7th Edition. Lawbook Co., (2006), (p.292, n322.)
- 5a. Daubert v. Dow Pharmaceuticals Inc., 509 U.S. 579 (1993)
- 5b. Brief for the American Association for the Advancement of Science and the National Academy of Sciences as Amici Curiae in support of the respondent, Merrell Dow Pharmaceuticals, Jan 19, 1993. p. 18.
6. Frye v. United States. 293 F2d 1013 at 1014 (1923)
7. R v. Gallagher [2001] NSWSC 462. Reasons for judgement (25-27).
8. United States Federal Rules of Evidence, Rule 702: Testimony by Experts: “If scientific, technical, or other specialised knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case”.
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