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Using the 'hot tub': how concurrent expert evidence can help courts

Australian courts and agencies have been acknowledged as having the most experience with the 'hot tub' method, in which experts give their evidence concurrently—although international interest is developing, for example in the USA, Canada and the UK. Justice Steven Rares of the Federal Court of Australia and the Supreme Court of the Australian Capital Territory explains some of the history of expert evidence; the purposes and technique of concurrent evidence; and the technique's virtues

When expert evidence is tendered in contested proceedings, traditionally each party will call one or more expert witnesses whose evidence, in chief, supports that party's case.[1] Cross-examination is the traditional common law method for testing that evidence. The forensic use and testing of expert evidence in this way has often produced a number of concerns:

- each expert is taken tediously through all their contested assumptions and is then asked to make their counterpart's assumptions;
- considerable court time is absorbed as each expert is cross-examined in turn;
- the expert issues can become submerged or blurred in a maze of detail;
- juries, judges and tribunals frequently become concerned that an expert is partisan or biased;
- often the evidence is technical and difficult to understand;
- the experts feel artificially constrained by having to answer questions that may misconceive or misunderstand their evidence;
- the experts feel that their skill, knowledge and, often considerable, professional accomplishments are not accorded appropriate respect or weight;
- the court does not have the opportunity to assess the competing opinions given in circumstances where the experts consider that they are there to assist the court[2]—rather, experts are concerned, with justification, that the process is being used to twist or discredit their views, or, by subtle shifts in questions, to force them into a position that they do not regard as realistic or accurate.

In 1999, an empirical study of Australian judges found that 35% considered bias as the most serious problem with expert evidence.[3] Another 35% considered that the presentation or testing of the expert was the most serious problem. This was manifested in their differing concerns about poor examination in chief (by the expert's side's own legal counsel) (14%), poor cross-examination (11%), and the experts' difficult use of language (10%).

In many situations calling for evidence, the 'hot tub' offers the potential for a much more satisfactory experience of expert evidence for all those involved. It enables each expert to concentrate on the real issues between them. The judge or listener can hear all the experts discussing the same issue at the same time to explain each of their points in a discussion with a professional colleague. The technique reduces the chances of the experts, lawyers, and judge, jury or tribunal misunderstanding what the experts are saying.

The technique is of general application. I have seen it used to deal with topics as diverse as accounting, quantity surveying, fire protection requirements, pharmaceutical patents, wildlife paths, metallurgy, naval architecture, expert navigation of Panamax size (230m) container ships in a gale, mechanical engineering, the appropriate flooring for elephant enclosures in zoos, and the mating of those mammals.

A short historical excursion

Courts have struggled for a long time with the consequences of the use by each party, in the adversarial system, of an expert whose evidence, at least in chief, favours that party. Professor Wigmore suggested that the remedy lay in 'removing this partisan feature: i.e.

by bringing the expert witness into court free from any committal to either party'.[4] There was a fear in judges that this object is not easy to achieve. Sir George Jessel MR observed in 1876 that sometimes the court had appointed its own expert under an inherent power to do so. He lamented:[5]

It is very difficult to do so in cases of this kind. First of all the Court has to find out an unbiased expert. That is very difficult.

He accepted that there was no reason for experts necessarily to agree in their opinions. However, Jessel MR declaimed the way parties searched for experts to find one or more who would give evidence in support of that party's case, leaving the rest as discards, about whom the court would know nothing. He said that he had been counsel in a case where his solicitor had consulted 68 experts before finding one who supported their client's case; hence his mistrust of the system of 'opposing' experts.

Professor Wigmore evoked a vision that giving expert evidence was akin to coming to a graveyard or indeed the Calvary, saying:[6]

Professional men of honorable instincts and high scientific standards began to look upon the witness box as a golgotha, and to disclaim all respect for the law's method of investigation. By any standard of efficiency, the orthodox method registers itself as a failure, in cases where the slightest pressure is put upon it.

Many, no doubt, have had the experience of seeing an eminent and reputable expert in their field subjected to a cross-examination calculated to evoke the very response that Professor Wigmore noted. Such persons come away from the forensic experience justifiably scarred and disdainful of it as a process for eliciting intelligent and appropriate examination of expert opinion. They can be so discouraged by their forensic experiences that they no longer wish to be involved in assisting courts.

Concurrent evidence is a means of eliciting expert evidence with more input and assistance from the experts themselves in lieu of their, perhaps unfairly, perceived role as being inherently, even if not consciously, biased to the case of the party calling them. This is not my perception, but has developed, as Jessel MR once described, through a distrust of expert evidence:[7]

not only because it is universally contradictory, and the mode of its selection makes it necessarily contradictory, but because I know of the way in which it is obtained. I am sorry to say the result is that the Court does not get that assistance from the experts which, if they were unbiased and fairly chosen, it would have a right to expect.

It is not inherently bad that experts might not reach the same conclusion. As Downes J has stated extra-judicially:

the fallacy underlying the one-expert argument lies in the unstated premis[e] that in fields of expert knowledge there is only one answer.[8]

Contradictory evidence can assist the tribunal of fact, simply because it elaborates the alternatives. As L.W. Street J noted, the court does not choose between the experts, preferring one opinion over another, but uses their differing views to assist in reaching its own conclusion.[9] Valuation and issues of similarity in copyright cases are examples that readily spring to mind, as well as expert economic evidence.[10]

Often in my experience at the Bar, the real dispute between experts did not lie in their conclusions at all. Rather, it was that they had proceeded on different assumptions. Because they were briefed by the particular litigant paying them, they were not asked to opine as to whether, if they accepted the other expert's assumptions, they would come to the same conclusion as the other expert. Instead, the experts debated the assumptions. This was largely a sterile exercise for them, since they did not have knowledge of the primary facts.

In the Federal Court of Australia, and in other tribunals presided over by Federal Court judges, concurrent evidence is also used. Lockhart J, when President of the Trade Practices Tribunal, was instrumental in introducing the technique to Australian jurisprudence.[11] One of the first uses of the 'hot tub' in court proceedings in Australia was by Rogers J in an insurance case in 1985.[12]

Concurrent evidence in practice

Initially, and my own experience is to this effect, uninitiated counsel are highly suspicious of concurrent evidence. That suspicion evaporates once they participate. Why is this so? It is because of the efficiency and discipline that the process brings to bear.

Pre-trial directions: the way concurrent evidence generally works, although individual judges or tribunals may have their own variants,[13] is that after each expert has prepared their evidence, there is a pre-trial order that they confer, without lawyers, to prepare a joint report on the matters about which they agree and those on which they disagree, giving short reasons as to why they disagree. Sometimes this process will identify that the experts agree on everything that each has said in their reports, on the basis that the opposing expert accepts the assumptions that the other has used. Thus, the role of the expert evidence is finished, and the question resolves into one of dry fact proven by lay witnesses or other evidence. That was my experience in Australasian Performing Right Association Ltd v Monster Communications Pty Ltd.[14] On most other occasions, the range of difference between the experts, apparently vast if one put their two reports side by side, reduces to a narrow point or points of principle in their expertise.

In the courtroom: generally, at the conclusion of both parties' lay evidence or at a convenient time in the proceedings, the experts are called to give evidence together in their

respective fields of expertise. It is important to set up the courtroom so that the experts (there can be many on occasion) can all sit together with convenient access to their materials for their ease of reference. I have recently had seven experts give evidence concurrently on one issue. They sat in the jury box. One microphone is then made available for all of the experts so that only one can speak at a time.

The judge explains to the experts the procedure that will be followed and that the nature of the process is different to their traditional perception or experience of giving expert evidence. First, each expert will be asked to identify and explain the principal issues, as they see them, in their own words. After that, each can comment on the other's exposition. Each may ask then, or afterwards, questions of the other about what has been said or left unsaid. Next, counsel is invited to identify the topics upon which they will cross-examine. Each topic is then addressed in turn. Again, if need be, the experts comment on the issue, and then counsel—in the order they choose—begin questioning the experts. If counsel's question receives an unfavourable answer, or one counsel does not fully understand it, they can turn to their expert and ask what that expert says about the other's answer.

This has at least two benefits. First, it reduces the chance of the first expert obfuscating in an answer. Second, it stops counsel going after red herrings because of a suspicion that their own lack of understanding is due to the expert fudging. In other words, because each expert knows that his or her colleague can expose any inappropriate answer immediately, and can also reinforce an appropriate one, the evidence generally proceeds directly to the critical, and genuinely held, points of difference. Sometimes these differences will be profound and, at other times, the experts will agree that they are disagreeing about their emphasis, but that the point is not relevant to resolving their real dispute.

The experts are free to ask each other questions or to supplement each other's answers after they are given. The only rule is that the expert who has the microphone has the floor. Generally, the experts co-operate and freely and respectfully exchange their views. Often one will see them arriving at a consensus that becomes clear through the process.

Some examples of concurrent evidence

In *Strong Wise Ltd v Esso Australia Resources Ltd*,[15] eight expert witnesses gave oral evidence over five separate areas of specialised knowledge. Each had prepared at least one principal report, and some prepared a responsive report. In the pre-trial phase, I directed that the experts in each relevant discipline should confer, without the parties or their lawyers, and prepare a joint report that set out the issues on which they agreed and those on which they disagreed, giving brief reasons for their differences. I also directed that the experts in each discipline would give evidence concurrently. Here, the experts and their fields were three master mariners; two naval architects; two structural engineers; two metallurgical engineers; and two mechanical engineers.

The joint reports were extremely useful in crystallising the real questions on which the experts needed to give oral evidence. First, the experts usually readily accepted the other's opinion on the latter's assumptions in many instances. This position is frequently lost in long reports that debate, not that opinion, but the assumptions, which, in turn, usually depend on the facts that need to be found. Second, the process then helpfully identified the critical areas in which the experts disagreed.

When each concurrent evidence session began, I explained that the purpose of the process was to engage in a structured discussion. Each expert was asked to summarise what he (all were male) thought were the principal issues between him and his colleague(s). Each was free to comment on or question his colleague on what he had said both during the introductory part and throughout the process. After each expert had outlined the principal issues (usually one did this and the other agreed that it was a fair summary or added some brief further remarks), counsel identified the issues or topics on which they wished to cross-examine. I then invited whichever counsel wished to begin questioning to do so. The experts sat at a table where they had ample room to place their reports and materials. They had a single microphone for whoever was speaking, so that the transcript would record the relevant evidence and they would exercise self-discipline in responding. Where there are several experts, name plates in front of each can help the judge and court reporters to know who is speaking. Often when one had given an answer, the other would comment, or agree, thus narrowing the issues and focusing discussion.

As I have explained, the great advantage of this process is that all experts are giving evidence on the same assumptions, on the same point, and can clarify or diffuse immediately any lack of understanding that the judge or counsel may have about an issue. The taking of evidence in this way usually greatly reduced the court time spent on cross-examination, because the experts quickly got to the critical points of disagreement.

Another significant benefit of the process is generally a substantial saving of overall court time and costs. My first experience of the technique was a valuation case in the Land and Environment Court before the then Chief Judge, now McClellan JA, involving many experts in various fields.[16] The written evidence in their reports amounted to over one metre in height. Yet most of the expert evidence, apart from that of the four valuation experts, was, ultimately, the subject of joint reports on which all points were agreed. In the remaining few reports where there was disagreement, the area of dispute was narrowed to one, two or three small points of principle that were dealt with in concurrent evidence in blocks of between ten and 30 minutes. The two valuers for the applicant asserted that the value of the easement was between $20m and $30m. The two for the resuming authority argued that it was worth in the order of $1m or a little more. Their concurrent evidence concluded in a day and a quarter.

In such a dispute, in a conventional trial, an individual valuer

would have been cross-examined probably for over a day, and four would have been likely to take well over six days. There would have been extensive attacks on the selections of comparable properties, the varying assumptions of the land's development potential, and the like. In fact, the only reason the valuation evidence took longer than a day in that case was that one of the experts changed his evidence because of newly agreed expert evidence from another field that affected the costs of development. That change required further cross-examination.

The Judicial Commission of New South Wales and the Australian Institute of Judicial Administration jointly produced a DVD of that experience, entitled 'Concurrent Evidence – New Methods with Experts'. It is the largest-selling publication of the Judicial Commission, and provides a good example of how the technique works. Modesty prevents me from identifying the other counsel whose participation with Bernie Coles QC in the re-enactment, directly from the transcript, is partly featured on the DVD.[17]

Criticisms of concurrent evidence

Concurrent evidence, like the curate's egg, is only good in parts. The decision whether to proceed or continue with taking evidence concurrently may be influenced by the need to ensure fairness in the trial process. Some critics, including the prominent economist, Henry Ergas, and Davies J formerly of the Court of Appeal of the Supreme Court of Queensland, have expressed concern that 'hot tubs' may result in the more persuasive, confident or assertive expert winning the judge's mind, by, in effect, overshadowing or overwhelming the other expert.

Mr Ergas suggested that the 'hot tub' was a response to a perceived problem that experts, in giving complex economic evidence, would 'dumb down' their analysis into accounts that were little more than analogies to their underlying reasoning, so as to enable the lawyers, or decision-makers, to understand the concepts. He feared that this would result in economists, not trained in or familiar with the forensic analysis involved in cross-examination, rarely approaching the 'hot tub' in a structured and systematic way. He thought that 'hot tubs' were especially at risk of being dominated by participants who were more confident or assertive, traits that were unrelated to the merits of the analyses being presented.[18]

Davies J expressed a concern that the judge could be left with two opposed, but comparatively convincing, opinions by equally well-qualified experts, neither of whom had been shaken in the process. He suggested that the 'hot tub' protracted, rather than shortened, proceedings, and that it was too cumbersome, expensive and 'too adversarial'.[19] He was obviously suspicious of the likely integrity of the whole process.[20] He speculated, like Sir George Jessel MR more than a century before, that the parties' solicitors or counsel would audition the best expert to give evidence in court (as if that would be a new consideration).

These criticisms have not been validated in practice. Contrary to these spectres, experts generally take the various courts' expert codes of conduct very seriously.[21] After all, in general they value their reputations and integrity. More fundamentally, the joint report process often reveals that one party's case on a critical point will succeed or fail. This is because the experts are able to understand, through professional exchanges, what each has said and on what assumptions. The frequency of experts in joint reports agreeing on critical issues shows that the experts retain their independence and cut through the parties' different instructions to each, to reach the core question that they then answer.

Conclusion

Concurrent evidence, in general, greatly reduces the hearing time.[22] It efficiently and effectively identifies the issues. By the judge allowing each of the experts to explain themselves, at the start and end of the whole process, it is possible to allow them to feel that they have done justice to themselves.

No system is perfect. There are many flaws in each of our systems for obtaining evidence in court, but, like Sir Winston Churchill's analysis of democracy, it may be the worst possible system, but it is the best that anyone has yet invented. At the end of the process, one or more of the experts on occasion has volunteered that they have found this to be a much more satisfactory way of giving evidence than in a conventional cross-examination.

Litigation is an expensive, lengthy, stressful, and not always exact, means of undertaking a decision-making process. At the end of the day, the judge or jury must select whether they are satisfied or persuaded that one of the competing versions is to be preferred or accepted. Like other witnesses, experts will leave impressions on judges based on demeanour, including their apparent persuasiveness, whether giving evidence alone or in a 'hot tub'.

Because the experts have conferred and produced joint reports before going into the 'hot tub', the field of dispute is generally narrowed. Not all cases will suit the process. It may be that in patent cases, where the whole case revolves around conflicts within fields of expertise, concurrent evidence is not likely to assist a judge. However, I have so far found it of great assistance in hearing these cases. Concurrent evidence allows advocates to focus on the critical differences, with the assistance of their respective experts in the box, and, at the same time, to hammer home the strengths of their own, and the inadequacies in the other, expert's reasoning processes. In the end, concurrent evidence is generally likely to produce more ounces of merit, which will be worth more to a judge than pounds of charisma or demeanour.

Steven Rares

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[1] For the widespread use of concurrent evidence, see Wood, L.C. (2007), 'Experts In The Hot Tub', Anti-Trust, 21, p. 95; and Freckelton, I. and Selby, H. (2013), Expert Evidence: Law, Practice, Procedure and Advocacy, Lawbook Co., at [6.15.01].

[2] See, also, Street, L. (1992), 'Expert Evidence in Arbitrations and References', Australian Law Journal, 66, p. 861.

[3] Freckelton, I., Reddy, P. and Selby, H. (1999), 'Australian Judicial Perspectives on Expert Evidence: An Empirical Study', Australian Institute of Judicial Administration Incorporated, p. 37.

[4] Wigmore on Evidence (1940), third ed., Chadbourn Revision, Vol. II, section 563, p. 762.

[5] Thorn v Worthing Skating Rink Company (1876) 6 Ch D 415n, p. 416.

[6] Wigmore on Evidence (1940), third ed., Chadbourn Revision, Vol. II, section 563, p. 760. See, also, Blom-Cooper, L. (2006), 'Historical Background', pp. 6–7 [1.15]–[1.17], in L. Blom-Cooper (ed.), Experts in the Civil Courts, Oxford University Press; Golan, T. (2004), Laws of Men and Laws of Nature, Harvard University Press, pp. 110–8.

[7] Thorn v Worthing Skating Rink Company (1876) 6 Ch D 416n.

[8] Downes, G. (2006), 'Problems with Expert Evidence: Are Single or Court-Appointed Experts the Answer?', Journal of Judicial Administration, 15, p. 185.

[9] Archer, Mortlock Murray & Woolley Pty Ltd v Hooker Homes Pty Ltd [1971] 2 NSWLR 278 at 286E-F.

[10] Visa International Service Association v Reserve Bank of Australia (2003) 131 FCR 300 at 438–439 [663]–[666] per Tamberlin J.

[11] The Hon. John Lockhart AO QC outlined his involvement with the history in the DVD 'Concurrent Evidence – New Methods with Experts', produced by the Judicial Commission of New South Wales and the Australian Institute of Judicial Administration.

[12] Spika Trading Pty Ltd v Royal Insurance Australia Ltd (1985) 3 ANZ Insurance Cases 60–663 (in the Commercial List of the Supreme Court of New South Wales).

[13] See a number of examples of orders made by the Administrative Appeals Tribunal and Australian Competition Tribunal in Freckelton, I. and Selby, H. (2013), Expert Evidence: Law, Practice, Procedure and Advocacy, Lawbook Co., at [6.15.240].

[14] Australasian Performing Right Association Ltd v Monster Communications Pty Ltd (2006) 71 IPR 212; [2006] FCA 1806.

[15] Strong Wise Ltd v Esso Australia Resources Ltd (2010) 185 FCR 149 at 175–176 [93]–[97]; [2010] FCA 240.

[16] Ironhill Pty Ltd v Transgrid (2004) 139 LGERA 398; [2004] NSWLEC 700.

[17] See www.judcom.nsw.gov.au/publications/education-dvds/copy_of_education-dvd.

[18] Ergas, H. (2006), 'Reflections on Expert Evidence', Bar News, Summer 2006–07, 39, pp. 42–3.

[19] Davies, G.L. (2004), 'Recent Australian Development: A Response to Peter Heerey', Civil Justice Quarterly 23, pp. 398–9.

[20] Davies, G.L. (2004), 'Recent Australian Development: A Response to Peter Heerey', Civil Justice Quarterly 23, pp. 377–98.

[21] The Federal Court's Code is in 'Practice Note CM7: Expert Witnesses in the Federal Court of Australia', issued by the Chief Justice on 4 June 2013.

[22] Australian Law Reform Commission (2000), 'Managing Justice: a Review of the Federal Justice System: Report No 89', at 6.117; New South Wales Law Reform Commission (2005), 'Expert Evidence', Law Reform Commission Report 109, at [6.51]; Freckelton, I. and Selby, H. (2013), Expert Evidence: Law, Practice, Procedure and Advocacy, Lawbook Co., at [6.15.200].