

*J D Heydon\**

## EVIDENCE OF FORENSIC SCIENTIFIC OPINION AND THE RULES FOR ADMISSIBILITY

### ABSTRACT

This article describes some possible methods by which unreliable forensic scientific evidence might be excluded. Is it irrelevant? Does its probative value exceed its prejudicial effect? Are there categories of it which should be automatically inadmissible? Are the existing rules for exclusion too loose, or too loosely applied? What is the correct balance between the roles of judge and jury?

The major theme of Professor Edmond's article – 'What Lawyers Should Know About the Forensic "Sciences"'<sup>1</sup> – is that the training of forensic scientists must be improved so that they, and others, understand the weaknesses and risks in forensic scientific reasoning better. In a similar vein, the article alerts lawyers to reasons for suspecting particular expert evidence and to methods of attacking it. But it also sounds a minor theme – the approaches to admissibility which might control weaknesses in the evidence of forensic scientists. Thus Professor Edmond reads the Goudge report<sup>2</sup> as calling on judges to be vigilant gatekeepers, attentive to the potential unreliability of expert evidence. He advocates the recognition of reliability as a prerequisite to admissibility. In that regard, he says: 'Lawyers and trial judges should be willing and able to ask to see research and to ask about procedures, standards, rates of error and limitations. They should expect to see reference to relevant published studies.'<sup>3</sup>

The purpose of this article is to raise some general questions about difficulties in using admissibility criteria to control the weaknesses which Professor Edmond has identified.

What are the evidentiary rules to be considered in relation to that enterprise? The first material rule relates to relevance. But 'relevance' does not necessarily imply any inquiry into the weight or correctness of expert opinion evidence. In Australia,

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\* QC.

<sup>1</sup> Gary Edmond, 'What Lawyers Should Know About the Forensic "Sciences"' (2015) 36 *Adelaide Law Review* 33.

<sup>2</sup> Stephen T Goudge, *Inquiry into Pediatric Forensic Pathology in Ontario* (Queen's Printer, 2008).

<sup>3</sup> Edmond, above n 1, 85.

in those jurisdictions which have legislation similar to the *Evidence Act 1995* (Cth),<sup>4</sup> relevance is defined by s 55(1) of the Act. It provides that the evidence that is relevant in a proceeding is evidence that, *if it were accepted* (and it may not be), *could* (not would) rationally *affect* (not determine) directly or *indirectly* the assessment of the probability of a fact in issue.<sup>5</sup> The threshold of admissibility is thus not high. In other Australian jurisdictions a common test for relevance is that which James Fitzjames Stephen employed. He said that the word ‘relevant’ means that:

any two facts to which it is applied are so related to each other that according to the common course of events one either taken by itself or in connection with other facts proves or renders probable the past, present, or future existence or non-existence of the other.<sup>6</sup>

But Stephen, in using the word ‘fact’, was proceeding in similar fashion to s 55(1). His test enabled one to assess whether one ‘fact’ was relevant to another. It assumed that the evidence tending to prove a fact, if it were admitted, would be accepted. It did not require that evidence be credible before it could be admitted.

A second group of material evidentiary rules are those permitting or compelling the exclusion of evidence the probative value of which was exceeded by its prejudicial effect, or which operated unfairly against the accused in a criminal case. Those common law rules are similar to, but may not be identical with, some provisions in the *Evidence Act 1995* (Cth) and its equivalents. Thus s 135(a) of the Act provides:

‘The court may refuse to admit evidence if its probative value is substantially outweighed by the danger that the evidence might:

(a) be unfairly prejudicial to a party ... ’

And s 137 provides:

In a criminal proceeding, the court must refuse to admit evidence adduced by the prosecutor if its probative value is outweighed by the danger of unfair prejudice to the defendant.

Here too the rules probably do not contemplate an inquiry into the *actual* credibility or reliability of evidence. The assessment of probative value for the purposes of these rules rests on an assumption that the evidence is accepted, and proceeds to inquire

<sup>4</sup> *Evidence Act 2011* (ACT); *Evidence Act 1995* (NSW); *Evidence (National Uniform Legislation) Act 2011* (NT); *Evidence Act 2001* (Tas); *Evidence Act 2008* (Vic). This legislation, alongside the *Evidence Act 1995* (Cth), will be referred to collectively, though misleadingly, as the Uniform Evidence Law, for the Acts are not uniform and do not deal with the whole of evidence law.

<sup>5</sup> *Evidence Act 1995* (Cth) s 55(1).

<sup>6</sup> Sir James Fitzjames Stephen, *Digest of the Law of Evidence* (Macmillan, 12<sup>th</sup> ed, 1936) 4, art I.

whether, on that assumption, the prejudicial effect of the evidence outweighs the assumed value.<sup>7</sup> And often the inquiry into prejudicial effect, too, assumes an effect or likely effect.<sup>8</sup> In *R v BD*,<sup>9</sup> Hunt CJ at CL said that the ‘prejudice’ to which the relevant sections referred was prejudice ‘which is unfair because there is a real risk that the evidence will be misused by the jury in some unfair way’. And the Australian Law Reform Commission, which was the progenitor of the Uniform Evidence Law, said that ‘unfair prejudice’ referred to the danger that the fact-finder might use the evidence

to make a decision on an improper, perhaps emotional, basis, ie on a basis logically unconnected with the issues in the case. Thus evidence that appeals to the fact-finder’s sympathies, arouses a sense of horror, provokes an instinct to punish, or triggers other mainsprings of human action may cause the fact-finder to base his decision on something other than the established propositions in the case. Similarly, on hearing the evidence the fact-finder may be satisfied with a lower degree of probability than would otherwise be required.<sup>10</sup>

Thus there is a difficulty underlying attempts to control unsatisfactory expert evidence either by holding it irrelevant or by holding its use to be excessively prejudicial or unfair. It is true that parts of the law of evidence which deal with admissibility do exclude certain categories of evidence which may be unreliable (eg involuntary confessions, or hearsay not falling within accepted categories). But outside those areas, the *reliability of particular items of evidence* is treated as a matter entirely for the trier of fact. The judge does not second-guess (or first-guess) the role of the trier of fact.

A third line of attack would be to seek to assess whether particular classes of expert evidence were routinely so unreliable, or carried an unacceptable risk of reliability, that the law should respond in a particular way. One way might be to exclude the evidence completely (like that of some very young or mentally infirm witnesses). Another way might be to exclude the evidence unless there were actual corroboration of it (as with the issue of whether a statement alleged to be perjured was false). Another way might be to create a duty to give a warning that caution should be exercised in using the evidence unless there were actual corroboration of it (as with accomplice evidence at common law). Another way might be to confer on the trial judge a power (not a duty) to warn that caution should be exercised in using the evidence unless there were actual corroboration of it.

<sup>7</sup> That, at least, is the New South Wales position: *R v XY* (2013) 84 NSWLR 363. For Victoria, see *Dupas v The Queen* (2012) 40 VR 182. See generally, J D Heydon, ‘Is the Weight of Evidence Material to its Admissibility?’ (2014) 26 *Current Issues in Criminal Justice* 219.

<sup>8</sup> Cf *R v Mundine* (2008) 182 A Crim R 302, 310 [44].

<sup>9</sup> (1997) 94 A Crim R 131, 139. See also *R v Suteski* (2002) 56 NSWLR 182, 199 [116].

<sup>10</sup> Australian Law Reform Commission, *Evidence*, Report No 26 (Interim) (1985) vol I, [644].

Whatever the substantive merits of these approaches, the tide of history, as reflected both in legislation and in judicial approaches, is flowing against them. That tide may turn. But at the moment its flow is strong. The law tends to favour the reception of evidence, untrammelled by restrictive rules of admissibility. It does not favour the selection of particular categories of information and the branding of them as always inadmissible. Nor does it favour compulsory corroboration warnings. Another difficulty is that some of the troubles caused by expert evidence arise not because of the type of evidence involved, but because of the slack way in which that type of evidence is sometimes presented. Legislative provisions prohibiting the use of expert evidence of any kind, or of specified kinds, might reduce the incidence of erroneous convictions, but it would also reduce the flow to courts of rigorously prepared, accurately presented and convincing information. It would make it much harder to convict accused persons who are guilty or to make just findings adverse to civil defendants. It could also make it harder for an accused person to raise a reasonable doubt.

A fourth line of control for expert evidence would be to concentrate on the particular evidentiary rules governing it. There is a notorious division within the judiciary about how restrictive those rules are or should be. Of course, the views of judges on what the rules should be have an important influence on what the rules identified by the judges are. That is so whether the judges are considering common law rules or the statutory provisions which now apply in several Australian jurisdictions. There is a similar division within the judiciary about how rigorously the rules, whatever they are, should be applied. There has been some, but diminishing, division on the question of whether it is a precondition to the admissibility of expert evidence that the witness identify the assumptions (or evidence) of primary fact on which the opinion is offered. The view that it is a precondition is now universal. The main proponents of the contrary view were judges of the Federal Court of Australia. However, they have fallen silent in the face of a practice note in that Court, issued with the authority of its judges, which now requires the factual assumptions to be stated.<sup>11</sup> There does remain quite a sharp division on the question of whether it is a precondition to the admissibility of expert evidence that there be evidence capable of supporting the assumptions of primary fact – evidence from either the expert or other sources, which either has been tendered or will be before the close of the tendering party's case. Decisions in State courts favour the strict view. Decisions of the Federal Court of Australia favour the laxer view.

Professor Edmond does not identify this particular controversy as one which affects his criticisms of the present position regarding the admissibility of forensic scientific evidence. To adopt the laxer approach to admissibility would not assist in solving the problems with which he is concerned. But some of the recommendations of reforming bodies which Professor Edmond quotes are worth comparing with the Australian law on expert evidence. Thus Professor Edmond, after complaining of a

<sup>11</sup> Federal Court of Australia, *Practice Note CM 7 – Expert witnesses in proceedings in the Federal Court of Australia*, 4 June 2013.

lack of ‘stringency in admissibility decision-making’,<sup>12</sup> quotes Recommendations 95 and 97 of the Goudge Report.<sup>13</sup> Recommendations 95 and 97(b)(ix) in particular correspond with what the High Court construed s 79 of the *Evidence Act 1995* (NSW) as requiring.<sup>14</sup> Thus Recommendation 95(a) requires articulation of the basis for a forensic pathologist’s opinion in a completely transparent way by stating the reasoning process followed, which leads to the opinion expressed.<sup>15</sup> The majority in *Dasreef’s Case* required the opinion to be ‘wholly or substantially based’ on the witness’s expert knowledge.<sup>16</sup> That requires a disclosure of how the expert reasoned from the expert knowledge to the opinion.

Further, Recommendation 95(b) requires forensic pathology opinions to articulate the ‘pathology facts found’,<sup>17</sup> which, when the expert’s reasoning process is applied to them, lead to the opinions expressed. As indicated earlier, the Australian position is that the assumptions (or evidence) of primary fact on which the opinion is offered must be identified. Recommendation 84(c) of the Goudge Report requires a forensic pathologist’s opinion to be ‘communicated in language that is not only accurate but also clear, plain, and unambiguous’.<sup>18</sup> Similar thinking underlies Lindgren J’s hints to experts in *Harrington-Smith v Western Australia [No 7]*.<sup>19</sup> Recommendation 129 of the Goudge Report requires the court clearly to ‘define the subject area of the witness’s expertise and vigorously confine the witness’s testimony to it’.<sup>20</sup> This rather basic proposition already corresponds with Australian law. It therefore seems fairly arguable that a strict formulation and application of the particular rules that apply to the reception of evidence would alleviate some of the problems Professor Edmond discusses.

Professor Edmond makes one suggestion which may be questioned. He states that ‘defence lawyers (and prosecutorial obligations) have not exposed fundamental and pervasive problems across the forensic sciences and medicine’.<sup>21</sup> He begins a list of suggestions by saying that: ‘It seems that we need to consider reform, such as lower thresholds for judicial notice’.<sup>22</sup> How would this help? In one sense, ‘judicial notice’ refers to the capacity of a trier of fact to find a fact even though there is no evidence

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<sup>12</sup> Edmond, above n 1, 52, n 89.

<sup>13</sup> Goudge, above n 2, 427, 429–30.

<sup>14</sup> *Dasreef Pty Ltd v Hawchar* (2011) 243 CLR 588, 602–3 [32], 604–5 [39]–[40], 605 [42] (*‘Dasreef’s Case’*).

<sup>15</sup> Goudge, above n 2, 427.

<sup>16</sup> *Dasreef’s Case* (2011) 243 CLR 588, 603 [32].

<sup>17</sup> Goudge, above n 2, 427.

<sup>18</sup> *Ibid* 408.

<sup>19</sup> (2003) 130 FCR 424, 429–30 [28]–[31].

<sup>20</sup> Goudge, above n 2, 475.

<sup>21</sup> Edmond, above n 1, 98.

<sup>22</sup> *Ibid*.

of it, where it is notorious.<sup>23</sup> In another sense, the expression ‘judicial notice’ can be used to refer to the capacity of a trier of fact to take into account matters suggested by the ordinary experience of life, whether or not they are notorious or even uncontroversial.<sup>24</sup> How would loosening the tests for taking either type of ‘judicial notice’ help protect litigants, particularly accused persons, against unsound expert evidence? The protection would come either at the stage when the judge is considering admissibility or at the stage when the jury is considering weight. Creating lower thresholds for judicial notice of either kind would not assist either judge or trier of fact to appreciate that superficially impressive expert evidence was in fact flawed. The passages in which Professor Edmond makes these suggestions include a protest against the view that ‘issues such as juror comprehension and reliability (and even legislative facts) should be raised at trial’.<sup>25</sup> The suggestion that trials be run on one basis, and appeals on another, is unattractive. Even a successful reversal of a conviction on appeal is a harrowing experience for the victor. Expert evidence goes to fact-finding, and fact-finding is pre-eminently something to be engaged in as part of a trial.

Professor Edmond’s final suggestion in relation to the admissibility of expert evidence is that judges should be much more robust in excluding evidence. He seems to advocate judges testing expert evidence for themselves if it has not been properly attacked by defence counsel. Proper testing of evidence on the initiative of the judge would require a radical alteration in the judicial role from umpire to player. It would require the holding of a *voir dire*. If defence counsel is not equipped or not inclined to attack the reliability of the evidence, how is the judge better equipped? Like the trier of fact, the judge has lay skills only, not expert skills. Further, the suggestion assumes that unreliability is a valid ground for exclusion. If that assumption were sound, the law would be radically different from what it is.

Professor Edmond’s suggestion raises various questions. What test would the judge apply? Would it suffice for the judge to conclude that the jury could believe the expert? Or would it be necessary for the judge to experience a personal belief, whether on the balance of probabilities or beyond reasonable doubt, in the reliability of the evidence? Is that belief to be judged only in light of the evidence of each expert considered alone? Or would the judge have to hear all the experts on a point before deciding that the evidence of any of them was admissible? If the process were conducted before there were evidence of the primary facts, it might prove otiose if the primary evidence fell short of the tendering party’s expectations. If the process were conducted in the light of the primary facts, can the legal system cope with a regime involving not a mini trial by judge followed by a main trial by jury, but two separate and substantial trials in any proceeding where the judge found an expert’s evidence to be admissible? Could the legal system – ultimately the state – absorb the cost of this?

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<sup>23</sup> See LexisNexis, *Cross on Evidence* (at Service 182) [3015]–[3160].

<sup>24</sup> *Ibid* [3200]–[3305].

<sup>25</sup> Edmond, above n 1, 98.

What would be the effect on the judge's capacity to sum up dispassionately to the jury on an issue the judge had already reached a personal view on? And what would be the effect on jury autonomy and diligence if the jurors knew, as some of them would know, that the case only comes to them because the trial judge has believed a key witness? The last two difficulties will remain even though the standard of proof before the judge is less than the standard of proof before the triers of fact (as s 142 of the *Evidence Act 1995* (Cth) provides). In short, all the difficulties will arise that arise when a judge has to decide on an issue which is also an issue for the triers of fact. That is because the judge cannot hold that the evidence is admissible unless it is reliable, and the jury must hold that the evidence lacks sufficient weight to support a finding for the tendering party unless it is reliable.

