

## **HONEYSETT v THE QUEEN (2014) 311 ALR 320: OPINION EVIDENCE AND RELIABILITY, A STICKING POINT**

### I INTRODUCTION

In *Honeysett v The Queen*,<sup>1</sup> the High Court of Australia considered the admissibility of opinion evidence under Part 3.3 of the *Evidence Act 1995* (NSW) (*Evidence Act*). This case note examines the Court's decision in *Honeysett* and assesses the approach taken by the Court in interpreting s 79(1) of the *Evidence Act*. It probes the reluctance of the Court to read reliability into a determination of admissibility under s 79(1) and considers the treatment of new and developing areas of specialised knowledge. The broader procedural implications of the Court's determination are also evaluated, taking account of the 'uneasy alliance'<sup>2</sup> between law and science and adversarial doctrine.

### II OPINION EVIDENCE

The *Evidence Act 1995* (NSW) is in most respects uniform with the *Evidence Act 1995* (Cth). The two Acts are drafted in identical terms except in so far as differences are identified by appropriate annotations to the texts and minor drafting variations are required by virtue of one Act being a New South Wales Act and the other being a Commonwealth Act.<sup>3</sup> Part 3.3 of the *Evidence Act* governs the admissibility of opinion evidence at trial.

An opinion is 'commonly taken to mean' an inference drawn from observed and communicable data.<sup>4</sup> Under s 76(1) of the *Evidence Act*, evidence of an opinion 'is not admissible to prove the existence of a fact about the existence of which the opinion was expressed.' However, the legislation provides several exceptions to this exclusionary rule. Expert evidence may be adduced pursuant to s 79(1), provided the two conditions of admissibility elucidated in the case law are met.<sup>5</sup> First, a witness must

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<sup>1</sup> (2014) 311 ALR 320 (*Honeysett*).

<sup>2</sup> National Research Council, Committee on Identifying the Needs of the Forensic Sciences Community, *Strengthening Forensic Science in the United States: A Path Forward* (National Academies Press, 2009) 86.

<sup>3</sup> See, eg, *Evidence Act 1995* (NSW) ch 1.

<sup>4</sup> *Lithgow City Council v Jackson* (2011) 244 CLR 352, 359 [10]; See also *Allstate Life Insurance Co v Australia & New Zealand Banking Group Ltd [No 5]* (1996) 64 FCR 73, 75.

<sup>5</sup> *Honeysett* (2014) 311 ALR 320, 325 [23]; *Dasreef Pty Ltd v Hawchar* (2011) 243 CLR 588, 602 [32] (*Dasreef*); *R v Tang* (2006) 65 NSWLR 681, 712 [134].

have ‘specialised knowledge based on the person’s training, study or experience’.<sup>6</sup> Secondly, the opinion must be ‘wholly or substantially based on that knowledge’.<sup>7</sup>

Distinct from ‘common knowledge’, ‘specialised knowledge’ is knowledge outside that of persons who have not acquired an understanding of the subject matter by way of training, study or experience.<sup>8</sup> Such knowledge ‘connotes more than subjective belief or unsupported speculation [and] applies to any body of known facts or to any body of ideas inferred from such facts or accepted as truths on good grounds’.<sup>9</sup> For the purposes of s 79(1), it is therefore sufficient if an opinion is substantially based on specialised knowledge acquired through training, study or experience.<sup>10</sup>

### III BACKGROUND

#### *A Facts*

On 17 September 2008 a robbery took place at the Narabeen Sands Hotel in New South Wales. Disguised and armed, three robbers entered the premises after the close of trading. Wielding a pink-handled hammer, Offender One wore dark attire and gloves, and shrouded his head and face in a white covering. Whilst three employees were present at the time of the break-in, witness testimony describing Offender One was ‘necessarily vague’.<sup>11</sup> Two witnesses did, however, liken Offender One’s head covering to a white t-shirt. The robbers fled in a getaway vehicle identified as an Audi RS4. Fatefully, the pink-handled hammer was left behind at the scene.

Heavily reliant upon DNA evidence, the prosecution case was largely circumstantial. The police recovered a stolen Audi RS4 on 25 November 2008, finding a sports bag and a white t-shirt inside. Analysis of DNA samples taken from both the hammer and the t-shirt matched the DNA profile of the appellant.<sup>12</sup> Closed-circuit television cameras (‘CCTV’) had also recorded the robbery. Over objection, the prosecution adduced evidence of anatomical characteristics common to both the appellant and Offender One from Professor Maciej Henneberg, an anatomist. Admitted as an item of circumstantial evidence to ‘support a conclusion of identity’,<sup>13</sup> Professor Henneberg’s opinion was based on repeated viewing of both the CCTV imaging and images of the appellant. Following a trial in the District Court of NSW, the appellant was convicted of armed robbery.

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<sup>6</sup> *Evidence Act 1995* (NSW) s 79(1).

<sup>7</sup> *Ibid.*

<sup>8</sup> *Honeysett* (2014) 311 ALR 320, 325 [23].

<sup>9</sup> *Ibid*; *Daubert v Merrell Dow Pharmaceuticals Inc* (1993) 509 US 579, 590; *R v Tang* (2006) 65 NSWLR 681, 712 [138].

<sup>10</sup> *Honeysett* (2014) 311 ALR 320, 325–6 [24].

<sup>11</sup> *Ibid* 322 [6].

<sup>12</sup> *Ibid* 322 [8].

<sup>13</sup> *Ibid* 329–30 [40].

The appellant appealed against his conviction to the NSW Court of Criminal Appeal, challenging the admission of Professor Henneberg's evidence under s 79(1) of the *Evidence Act*.<sup>14</sup> The appeal was dismissed. The Court of Criminal Appeal held that the evidence had been rightly admitted as it was opinion evidence based on specialised knowledge derived from Professor Henneberg's training, study or experience.<sup>15</sup> In the alternative, it was held Professor Henneberg's evidence was admissible on the basis that his repeated viewing of the images had rendered him an 'ad hoc' expert.<sup>16</sup>

Granted special leave to appeal to the High Court on 14 March 2014, the appellant asserted that the Court of Criminal Appeal erred in finding the evidence of Professor Henneberg fell within the s 79(1) exception.

### B Decision

The Court delivered a unanimous judgment. French CJ, Kiefel, Bell, Gageler and Keane JJ held that it was an error of law to admit Professor Henneberg's evidence.<sup>17</sup> The Court determined that his opinion was not wholly or substantially based on his specialised knowledge within s 79(1) of the *Evidence Act*.<sup>18</sup> The order of the Court of Criminal Appeal was therefore set aside and the appeal allowed. The appellant's conviction was quashed and a new trial ordered.<sup>19</sup>

## IV SPECIALISED KNOWLEDGE

Every man gets a narrower and narrower field of knowledge in which he must be an expert in order to compete with other people. The specialist knows more and more about less and less and finally knows everything about nothing — Konrad Lorenz<sup>20</sup>

The submission of expert opinion evidence is a regular feature of judicial proceedings both in Australia and abroad. Experts in medicine, geology, architecture and engineering frequently proffer opinion evidence at trial. Expert evidence is not, however, limited to these orthodox areas of professional expertise.<sup>21</sup> In criminal matters, forensic science experts are routinely called upon to give evidence relating to an array of disciplines.<sup>22</sup> These disciplines include toxicology, firearms, trace

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<sup>14</sup> *Honeysett v The Queen* [2013] NSWCCA 135.

<sup>15</sup> *Ibid* [66] (Macfarlan JA).

<sup>16</sup> *Ibid* [60].

<sup>17</sup> *Honeysett* (2014) 311 ALR 320, 331 [46].

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

<sup>19</sup> *Ibid* 331 [49].

<sup>20</sup> Larry Collins and Thomas Schneid, *Physical Hazards of the Workplace* (CRC Press LLC, 2001) 107.

<sup>21</sup> *R v Robb* (1991) 93 Cr App R 161, 164.

<sup>22</sup> National Research Council, above n 2, 86.

evidence, controlled substances, blood pattern analysis, biological screening, crime scene investigation and impression evidence.<sup>23</sup>

Owing to advances in digital technology, modern forensic science methods increasingly ‘individualise’ particular types of evidence.<sup>24</sup> In *Honeysett* Professor Henneberg identified forensic identification as within his specialised knowledge, namely the comparison of individuals based on the inspection of images (‘body mapping’).<sup>25</sup> A form of circumstantial identification evidence, facial and body mappers are ‘restricted to the language of similarity’.<sup>26</sup> Analysts assess anatomical similarities between two or more persons by identifying any number of individual characteristics.<sup>27</sup>

A qualitative method of assessing relevant similarities and differences between images, body mapping is a field of expert analysis of ‘fairly recent origin’.<sup>28</sup> It is generally accepted that facial and body mapping employ three techniques: photoanthropometry, morphological analysis and photograph superimposition.<sup>29</sup> As yet, however, there is no credible explanation or body of research that explains how facial and body mappers surmount issues of image distortion, lighting discrepancies, varied camera angles, lenses and blurriness or low image quality.<sup>30</sup> It remains unclear why those images that purport to present similarities are preferred to those that tend to indicate otherwise.<sup>31</sup>

Whilst advances in science and new techniques may serve to enhance modern methods of crime detection,<sup>32</sup> the probative value of resultant evidence is subject to the reliability of the technique.<sup>33</sup> Distinct from analytical disciplines, novel methods such as facial and body mapping are highly subjective, open to expert interpretation.<sup>34</sup> The requirement under s 79(1) that an expert possess specialised knowledge

<sup>23</sup> Ibid 38; Ian Freckelton and Hugh Selby, *Expert Evidence: Law, Practice, Procedure and Advocacy* (Thomson Reuters, 2nd ed, 2002) 53–4.

<sup>24</sup> National Research Council, above n 2, 43. Shoe and tire impressions, dermal ridge prints, toolmarks and handwriting are apposite examples. Unique markings acquired in a random fashion by a source item are purportedly transmitted from that item to the evidence under examination and subsequently matched.

<sup>25</sup> *Honeysett* (2014) 311 ALR 320, 323 [11].

<sup>26</sup> Gary Edmond, ‘Specialised Knowledge, the Exclusionary Discretions and Reliability: Reassessing incriminating expert opinion evidence’ (2008) 31(1) *University of New South Wales Law Journal* 1, 31.

<sup>27</sup> *Honeysett* (2014) 311 ALR 320, 324 [17]; *Morgan v The Queen* (2011) 215 A Crim R 33, 56 [124].

<sup>28</sup> *R v Jung* [2006] NSWSC 658, [55].

<sup>29</sup> *R v Tang* (2006) 65 NSWLR 681, 685 [17].

<sup>30</sup> Edmond, above n 26, 33.

<sup>31</sup> Ibid 32.

<sup>32</sup> *R v Clarke* [1995] 2 Cr App R 425, 429–430.

<sup>33</sup> Ibid 431.

<sup>34</sup> National Research Council, above n 2, 87.

is important for grounding admissibility. It provides information that facilitates ‘the rational evaluation of expert opinion evidence.’<sup>35</sup> However, the ‘utility of being experienced or qualified in the application of an untested technique is unclear’.<sup>36</sup>

As acknowledged by the Australian Law Reform Commission, ‘new and developing knowledge poses a difficulty’<sup>37</sup> for the reception of expert opinion evidence at trial. For the purpose of applying s 79(1), it must be determined ‘at what point in the development of the learning is there an area of expertise’.<sup>38</sup> Absent demonstrable evidence of specialised knowledge, evidence given by an expert is merely opinion ‘based on impressions, speculation and guesses’.<sup>39</sup> Where areas of expertise are progressed or developed in novel ways, trained professionals are ostensibly testifying in areas ‘beyond their actual expertise or beyond the collective ability of any recognisable field or identifiable sub-discipline’.<sup>40</sup>

There is precedent to suggest that facial and body mapping do not constitute ‘specialised knowledge of a character which can support an opinion of identity.’<sup>41</sup> In *R v Tang*, opinion evidence premised on body mapping was characterised as a ‘bare ipse dixit’.<sup>42</sup> The protocols used by the expert in that instance were neither identified nor explained. Evidence given at trial instead indicated that the prosecution expert had ‘developed a previously established area of forensic anatomy into a new area’ through her own innovation and process.<sup>43</sup>

Similarly, in *Morgan v The Queen*,<sup>44</sup> ‘body mapping’ evidence given by Professor Henneberg — the same expert called upon in *Honeysett* to give evidence — was deemed inadmissible. Justice Hidden was critical of a ‘lack of research into the validity, reliability and error rate of the process’ applied.<sup>45</sup> It was not apparent on the evidence that Professor Henneberg’s anatomical expertise equipped him to take account of garmented limbs and features.<sup>46</sup>

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<sup>35</sup> Gary Edmond and Mehera San Roque, ‘Before the High Court: *Honeysett v The Queen*: Forensic Science, ‘Specialised Knowledge’ and the Uniform Evidence Law’ (2014) 36 *Sydney Law Review* 323, 330.

<sup>36</sup> *Ibid* 339.

<sup>37</sup> Australian Law Reform Commission, *Uniform Evidence Law*, Report No 102 (2005) 287.

<sup>38</sup> *Ibid* 287.

<sup>39</sup> Edmond and Mehera San Roque, above n 35, 335.

<sup>40</sup> Edmond, above n 26, 7.

<sup>41</sup> *R v Tang* (2006) 65 NSWLR 681, 714 [146].

<sup>42</sup> *Ibid* 714 [146].

<sup>43</sup> *Ibid* 709 [123].

<sup>44</sup> (2011) 215 A Crim R 33.

<sup>45</sup> *Morgan v The Queen* (2011) 215 A Crim R 33, 59 [138].

<sup>46</sup> *Ibid* 60 [141]. See also [138]: the court noted that Professor Henneberg’s erroneous use of the product rule in his hypothetical statistical calculation, were matters ‘properly to be taken into account in assessing the reliability of his evidence as an expert.’

Despite this, even if the views of a witness are ‘unproven and not accepted by others’, that witness will likely be considered a qualified expert if their view is not otherwise ‘scientifically established as false’.<sup>47</sup> This approach ensures ‘developments in scientific thinking [are] not kept from the Court, simply because they remain at the stage of hypothesis’.<sup>48</sup> It does, however, ‘assume that juries, as well as judges, are able to assess expert evidence like any evidence’.<sup>49</sup> As stated by Dyson Heydon, ‘where the discipline of the expert is of a kind beyond the ordinary experience of the lay public, or where its scientific sub-stratum requires specialist skills to understand or test ... the court is going close to entrusting its process to the expert’.<sup>50</sup>

At the first instance, the circumstantial identification evidence in *Honeysett* was deemed to have such ‘significant probative value’ as to warrant its inclusion.<sup>51</sup> Professor Henneberg’s observations were one of the circumstances upon which it was open for the jury to draw a ‘conclusion of guilt’.<sup>52</sup> Yet, without objective methods of scrutiny and assessment, it is unlikely a trier of fact will be placed to evaluate evidence produced by novel or unconventional technique and method.<sup>53</sup> This conceivably hamstrings the Court’s ability to accurately weigh the probative value of unorthodox expert evidence against the prejudicial effect anticipated from its admission.

Whilst a great deal of confidence is thus invested in an expert’s training, study or experience,<sup>54</sup> every form of testimony is susceptible to error.<sup>55</sup> No forensic method has been shown to have the capacity to support, with a significant degree of certainty, conclusions about ‘individualisation’.<sup>56</sup> Where a particular study is not so advanced, there is greater risk of inaccurate representation of sources.<sup>57</sup> Ipse dixit and ‘educated guesses’ are inappropriate when proffering opinion based on new or unique forms of evidence.<sup>58</sup> The risk of injustice posed by unsatisfactory expert evidence is not insignificant.<sup>59</sup> There is a danger that greater weight will be assigned to the opinion evidence than can rationally be sustained.<sup>60</sup>

<sup>47</sup> *Commission for Government Transport v Adamcik* (1961) 106 CLR 292, 306; J D Heydon, *Cross on Evidence* (LexisNexis, 9th ed, 2013) 962. See also *Gilham v The Queen* (2012) 224 A Crim R 22 and *Wood v The Queen* (2012) 84 NSWLR 581.

<sup>48</sup> *R v Harris* [2006] 1 Cr App R 5, [270].

<sup>49</sup> J D Heydon, above n 47, 975.

<sup>50</sup> *Ibid* 975.

<sup>51</sup> *Honeysett* (2014) 311 ALR 320, 330 [41].

<sup>52</sup> *Ibid*.

<sup>53</sup> Adam Wilson, ‘Expert Opinion Evidence: The Middle Way’ (2009) 73(5) *Journal of Criminal Law* 430, 446.

<sup>54</sup> Edmond and San Roque, above n 35, 332.

<sup>55</sup> Wilson, above n 53, 436.

<sup>56</sup> National Research Council, above n 2, 87.

<sup>57</sup> *Dawson v Lunn* [1986] RTR 234, 238.

<sup>58</sup> Edmond, above n 26, 54.

<sup>59</sup> *Dasreef* (2011) 243 CLR 588, 611 [59] (Heydon J).

<sup>60</sup> Edmond, above n 26, 13.

## V RELIABILITY

Experience without theory is blind, but theory without experience is mere intellectual play — Immanuel Kant<sup>61</sup>

The *Honeysett* appeal was widely touted as an opportunity for the Court to ‘read reliability into s 79(1)’.<sup>62</sup> However, the Court held that a consideration of whether an opinion requires ‘independent means of validation’<sup>63</sup> before it may be found to be based on ‘specialised knowledge’ was beyond the scope of the appeal. Australian courts have typically avoided introducing ‘an extraneous idea such as reliability’<sup>64</sup> into the application of s 79(1). Owing to this narrower textual interpretation of s 79(1), judicial inquiry has instead been directed at establishing ‘specialised knowledge’.

However, s 79(1) mandates a ‘demonstrable link’ between expert opinion evidence and specialised knowledge.<sup>65</sup> Judge Blackmun’s oft-cited formulation of ‘knowledge’ in *Daubert v Merrell Dow Pharmaceuticals Inc* necessitates a ‘body of known facts’ or a ‘body of ideas inferred from such facts or accepted as truths on good grounds’.<sup>66</sup> More is required than ‘subjective belief or unsupported speculation’.<sup>67</sup> Eschewing reliability appears inconsistent with this formulation.

Given reliability mandates neither absolute certainty nor infallibility, the Court’s ostensible hesitation — manifest in its ‘focus of attention on the words “specialised knowledge”’<sup>68</sup> — is somewhat unfounded. The prosecution or defence need only provide ‘good grounds or a credible basis for believing that on the balance of probabilities a technique or approach is reliable’.<sup>69</sup> A precondition to admissibility of expert opinion evidence, a test of reliability has been readily adopted and applied in the United States,<sup>70</sup> Canada<sup>71</sup> and the United Kingdom.<sup>72</sup>

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<sup>61</sup> Gerard Drennan, Sara Casado and Louise Minchin ‘Dilemmas and Ethical Decision-Making’ in Zoe Ashmore and Richard Shuker (eds), *Forensic Practice in the Community* (Routledge, 2014) 40, 40.

<sup>62</sup> Edmond and San Roque, above n 35, 325.

<sup>63</sup> *Honeysett* (2014) 311 ALR 320, 330 [42].

<sup>64</sup> *R v Tang* (2006) 65 NSWLR 681, 712 [137].

<sup>65</sup> *Ibid* 715 [152].

<sup>66</sup> (1993) 509 US 579, 590; *R v Tang* (2006) 65 NSWLR 681, 712 [138] (Spigelman CJ); *Honeysett* (2014) 311 ALR 320, 325 [23].

<sup>67</sup> *Daubert v Merrell Dow Pharmaceuticals Inc* (1993) 509 US 579, 590.

<sup>68</sup> *R v Tang* (2006) 65 NSWLR 681, 712 [137].

<sup>69</sup> *R v Gilmore* [1977] 2 NSWLR 935, 939–40.

<sup>70</sup> *Daubert v Merrell Dow Pharmaceuticals Inc* (1993) 509 US 579, 590; *Kumho Tire Co v Carmichael* (1999) 526 US 137, 148.

<sup>71</sup> *R v Trochym* [2007] 1 SCR 239; *R v DD* [2000] 2 SCR 275; *R v J-LJ* [2000] 2 SCR 600.

<sup>72</sup> *R v Luttrell* [2004] 2 Cr App R 31; *Dawson v Lunn* [1986] RTR 234; *R v Harris, Rock, Cherry and Faulder* [2006] 1 Cr App R 5.

In 2011 the British Law Commission recommended that a test of sufficient reliability be applied to expert opinion evidence.<sup>73</sup> Opinion is sufficiently reliable and admissible when it is ‘soundly based’.<sup>74</sup> According with proposed criteria, opinions based on unjustifiable assumptions, improper or inappropriate methods and procedures or flawed data are inadmissible.<sup>75</sup> Absent sufficient scrutiny, opinion based on an untested hypothesis is also excluded.<sup>76</sup> Whilst forensic scientific opinion evidence necessarily involves a ‘subjective interpretive element’,<sup>77</sup> its admissibility must be tested against objective standards. If seeking to draw reliable inferences and conclusions from a proffered opinion, it follows that the opinion itself must meet a reliability threshold.<sup>78</sup>

Where expert opinion is premised on novel experimentation, method or technique, that general foundation material ought to be subject to adequate scrutiny. In order to establish that expert opinion is premised on specialised knowledge, the expert’s reasoning processes must be exposed.<sup>79</sup> Opinion evidence ‘requires demonstration or examination of the scientific or other intellectual basis of the conclusions reached’.<sup>80</sup> As contended by Heydon J in *Dasreef*:

Opinion evidence is a bridge between data in the form of primary evidence and a conclusion which cannot be reached without the application of expertise. The bridge cannot stand if the primary evidence end of it does not exist.<sup>81</sup>

At common law in South Australia, expert opinion evidence is admissible where a person possesses special knowledge or experience ‘which is sufficiently organized or recognized to be accepted as a reliable body of knowledge or experience’.<sup>82</sup> There is no reason to think that the expression ‘specialised knowledge’ in s 79(1) ‘gives rise to a test which is in any respect narrower or more restrictive than the position at common law’.<sup>83</sup>

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<sup>73</sup> British Law Commission, *Expert Evidence in Criminal Proceedings in England and Wales*, Report No 325 (2011) 58–60. This test encompasses both scientific and non-scientific expert opinion evidence.

<sup>74</sup> *Ibid* 61.

<sup>75</sup> *Ibid*.

<sup>76</sup> *Ibid*.

<sup>77</sup> *Ibid* 60.

<sup>78</sup> *Ibid*.

<sup>79</sup> *Ocean Marine Insurance Association (Europe) OV v Jetopay Ltd Ltd* (2000) 120 FCR 146, 150 [18], 151 [23].

<sup>80</sup> *Makita (Australia) Pty Ltd v Sprowles* (2001) 52 NSWLR 705, 743 [85] (Heydon JA).

<sup>81</sup> *Dasreef* (2011) 243 CLR 588, 622 [90].

<sup>82</sup> *R v Bonython* (1984) 38 SASR 45, 46–7 (King CJ); *HG v The Queen* (1999) 197 CLR 414, 432 [58] (Gaudron J).

<sup>83</sup> *HG v The Queen* (1999) 197 CLR 414, 432 [58] (Gaudron J); See also *Velevski v The Queen* (2002) 187 ALR 233, 253 [82]; *Osland v The Queen* (1998) 197 CLR 316, 338 [53] (Gaudron and Gummow JJ).



As conceded by the majority in *Dasreef*, ordinarily an expert's evidence must explain how their field of specialised knowledge applies to the 'facts assumed or observed so as to produce the opinion propounded.'<sup>84</sup> Such information about methodological limitations, selection biases and distortions enables the court to contextualise the processes applied by a particular expert.<sup>85</sup> However, a reasoned explanation of the application of the specialised knowledge to the circumstances of the case will be 'useless unless the assumed facts involved in that reasoning are facts which, if the evidence is accepted, are capable of being proved by it.'<sup>86</sup>

If the techniques and processes used by experts go untested, it is impossible to 'know if the opinions expressed by those with extensive training, study or experience are more accurate than the impression of ordinary citizens.'<sup>87</sup> Absent formal evaluation, the proficiency of an analyst is unknown. A trier of fact is instead forced to evaluate the plausibility of the opinion, any formal study undertaken by the expert, the expert's general experience or impressions of demeanour and credibility. However, these considerations do not equate to knowledge and are aptly characterised as 'distractions'.<sup>88</sup>

Expert opinion that is unreliable or of unknown reliability should not be aggrandised, particularly in circumstantial cases such *Honeysett*.<sup>89</sup> Admitting expert evidence on the basis that it furnishes the trier of fact with necessary identification evidence tends to 'displace (and trivialise) issues of reliability'.<sup>90</sup> An apt example, the case of *R v Jung* concerned the reception of facial mapping evidence, exhibited under the general appellation of 'definitive resemblance'.<sup>91</sup> Despite concessions made on the voir dire that no person in Australia had validated the expert's methods and that the expert did not keep records of her measurements, her opinion was admitted on the basis that it was within a field of specialised knowledge.<sup>92</sup> Astonishingly, agreement at trial that morphological analysis is beleaguered by the fact that photographic angles can alter and distort facial features had no bearing on admissibility.<sup>93</sup>

Evidentiary reliability could be assessed against the five criteria set out in *Daubert*.<sup>94</sup> The Court might consider whether the technique or process can be tested, the likely rate of error, whether appropriate practice standards have been applied, whether the technique has general acceptance and whether the technique has been described

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<sup>84</sup> *Dasreef* (2011) 243 CLR 588, 604 [37].

<sup>85</sup> Edmond, above n 26, 43.

<sup>86</sup> *Dasreef* (2011) 243 CLR 588, 639 [132] (Heydon J).

<sup>87</sup> Edmond and San Roque, above n 35, 337.

<sup>88</sup> *Ibid* 341.

<sup>89</sup> Edmond, above n 26, 43.

<sup>90</sup> *Ibid* 42; See, eg, *Honeysett* (2014) 311 ALR 320, 329–30 [40].

<sup>91</sup> *R v Jung* [2006] NSWSC 658, [26].

<sup>92</sup> *Ibid* [55].

<sup>93</sup> *Ibid* [9], [55].

<sup>94</sup> *Daubert v Merrell Dow Pharmaceuticals Inc* (1993) 509 US 579, 593–4.

in publication. Indeed, the ‘frailties’<sup>95</sup> of novel opinion have led Canadian courts to endorse the *Daubert* criteria, unwilling to allow ‘too easy an entry’ for untested evidence.<sup>96</sup> The case of *R v Trochym* held that ‘reliability is an essential component of admissibility.’<sup>97</sup> Whilst the degree of evidential reliability will necessarily vary according to circumstance, the admission of insufficiently reliable evidence is ‘likely to undermine the fundamental fairness of the criminal process’.<sup>98</sup>

## VI LAW AND SCIENCE

Science is facts; just as houses are made of stones, so is science made of facts;  
but a pile of stones is not a house and a collection of facts is not necessarily  
science — Henri Poincaré<sup>99</sup>

The relationship between law and science is perhaps best characterised as an ‘uneasy alliance’.<sup>100</sup> Courts have long lamented the ‘partiality’<sup>101</sup> of expert witnesses, sceptical of the manner in which parties screen and select consultant experts. Those experts willing ‘to bend their science in the direction from which their fee is coming’<sup>102</sup> and act as advocates for the party calling them have been staunchly criticised. In *Honeysett*, the Court concluded that Professor Henneberg’s opinion was merely based on a ‘subjective impression of what he saw when he looked at the images.’<sup>103</sup> Yet, presented as having relevant expertise, his evidence ‘gave the unwarranted appearance of science’.<sup>104</sup>

The so-called ‘CSI Effect’ has seen jurors come to expect and accept forensic evidence as conclusive.<sup>105</sup> This is of particular concern where methods of identification with ‘questionable epistemological provenance’<sup>106</sup> found the opinions so given. Indeed, if counsel then petitions the jury — as was the case in *Honeysett* — to accept such evidence because it is a ‘reliable science’ and is ‘something that [can be] explained’,<sup>107</sup> jurors may be more inclined to adopt incomplete and flawed understandings of the evidence.

<sup>95</sup> *R v J-LJ* [2000] 2 SCR 600, [28]–[29].

<sup>96</sup> *Ibid* [28]–[29]; *R v DD* [2000] 2 SCR 275.

<sup>97</sup> *R v Trochym* [2007] 1 SCR 239, 260 [27].

<sup>98</sup> *Ibid*.

<sup>99</sup> Henri Poincaré, *Science and Hypothesis* (Walter Scott Publishing Co Ltd, 1905) 157.

<sup>100</sup> National Research Council, above n 2, 86.

<sup>101</sup> *Dasreef* (2011) 243 CLR 588, 609 [56] (Heydon J).

<sup>102</sup> *Indianapolis Colts Inc v Metropolitan Baltimore Football Club Ltd* (1994) 34 F (3d) 410, 415 (Posner J).

<sup>103</sup> *Honeysett* (2014) 311 ALR 320, 330 [43].

<sup>104</sup> *Ibid* 330 [45].

<sup>105</sup> National Research Council, above n 2, 48.

<sup>106</sup> Edmond, above n 26, 7.

<sup>107</sup> *Honeysett* (2014) 311 ALR 320, 330 [40].

Professor Henneberg was supplied with a disc containing the CCTV footage and a separate envelope with two discs containing images of the appellant.<sup>108</sup> Whilst this process is accepted as standard practice, when an expert is sent photographs and asked to comment, the implication is obvious.<sup>109</sup> The tacit expectations placed upon forensic identification experts may bear upon their analysis and opinions, particularly when an expert is using novel or untested techniques.<sup>110</sup> Experts who venture opinions outside of their field of specialised knowledge may also ‘invest those opinions with a spurious appearance of authority’.<sup>111</sup> Given the highly selective nature of facial and body mapping, subsequent identification evidence is rendered susceptible to manipulation.

Inferring a test of reliability into s 79(1) will therefore go some way in mitigating what the courts have labelled the ‘white coat effect’.<sup>112</sup> It will ensure ‘weak, speculative and unreliable opinion[s]’<sup>113</sup> are fully tested and examined at trial. Any ‘beguiling scientific garb, which may conceal the blemishes within’, will be negated.<sup>114</sup>

## VII OPINION EVIDENCE AND ADVERSARIALISM

Justice cannot be for one side alone, but must be for both — Eleanor Roosevelt<sup>115</sup>

Courts invest substantial confidence in procedural safeguards such as cross-examination, rebuttal experts, direction and warnings.<sup>116</sup> However, there is nothing to suggest that even the most vigorous cross-examination ‘consistently or meaningfully exposes the very real limitations’ of novel opinion evidence.<sup>117</sup> Given that there are few objective standards or guidelines by which to assess emerging forensic science methods, the party objecting to neoteric opinion evidence has limited capacity to unpack its foundation. The Australian Law Reform Commission explained:

[W]here the reliability or credibility of the evidence is such that its weight is likely to be overestimated by the tribunal of fact because of an inability to test the evidence by cross-examination or for some other reasons, then these may be considerations relevant to the decision to exclude or limit the use of the evidence.<sup>118</sup>

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<sup>108</sup> Ibid 323 [13]–[14].

<sup>109</sup> Edmond, above n 26, 32.

<sup>110</sup> Ibid.

<sup>111</sup> *HG v The Queen* (1999) 197 CLR 414, 429 [44] (Gleeson CJ).

<sup>112</sup> *Morgan v The Queen* (2011) 215 A Crim R 33, 59 [65].

<sup>113</sup> Edmond and San Roque, above n 35, 324.

<sup>114</sup> Heydon, above n 47, 961.

<sup>115</sup> Eleanor Roosevelt, *The Autobiography of Eleanor Roosevelt* (Harper Publishing, 1961).

<sup>116</sup> Edmond, above n 26, 22; *Daubert v Merrell Dow Pharmaceuticals Inc* (1993) 509 US 579, 596; National Research Council, above n 2, 10.

<sup>117</sup> Edmond, above n 26, 37.

<sup>118</sup> Australian Law Reform Commission, above n 37, 565.

As contended by Gary Edmond, ‘structural symmetry is not the same as substantial fairness’.<sup>119</sup> To allow the tender of unreliable evidence or evidence of unknown reliability and then rely wholly upon adversarial or accusatorial court process ‘carries the risk of giving [the evidence] a foothold in the record’.<sup>120</sup> Whilst jury directions are considered ‘appropriate means of attacking shaky but admissible evidence’,<sup>121</sup> they will be of limited utility where an advocate makes a misleading, but ultimately persuasive, presentation.<sup>122</sup> It is therefore incumbent on the opposing party to challenge the testimony of an expert and ensure their opinions are ‘properly grounded, well reasoned and not speculative’.<sup>123</sup>

Where the prosecution adduces expert evidence, the defence is placed at a considerable disadvantage. Irrefutable critiques can be ‘parried on the basis that they are [otherwise] motivated’.<sup>124</sup> The practical need to discredit opinion evidence also imposes sizeable resource burdens on the defendant. Rather than establish a ‘prophylactic’ test of reliability, the submission of untested opinion evidence transmits the ‘responsibility of demonstrating unreliability onto the defence’.<sup>125</sup>

This operates in stark contrast to established principles of criminal law: that the evidential and persuasive burdens of proof are borne by the prosecution.<sup>126</sup> A consequence of the presumption of innocence, this so-called ‘golden thread’<sup>127</sup> of criminal law is somewhat abrogated by the inordinate onus placed on the defence to demonstrate unreliability. Owing to the Court’s reluctance to formally read reliability into s 79(1), it falls largely to the defence to challenge the supposed imprimatur of experts called by the prosecution. In this way the defence is impelled to subsume the trial court’s traditional gatekeeping function,<sup>128</sup> scrutinising expert testimony to ensure the principles and methods so applied are ‘reliable and applied reliably to the facts of the case’.<sup>129</sup>

## VIII CONCLUSION

The unanimous judgment in *Honeysett* does not evince flagrant ‘judicial disinterest in the reliability of expert opinion evidence’,<sup>130</sup> but rather highlights the Court’s

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<sup>119</sup> Edmond, above n 26, 37.

<sup>120</sup> *Dasreef* (2011) 243 CLR 588, 636 [123] (Heydon J).

<sup>121</sup> National Research Council, above n 2, 10.

<sup>122</sup> *Ibid* 236.

<sup>123</sup> *Ibid* 94; Edmond, above n 26, 39.

<sup>124</sup> Edmond, above n 26, 38.

<sup>125</sup> *Ibid* 39.

<sup>126</sup> *Woolmington v DPP* [1935] AC 462.

<sup>127</sup> *Ibid* 7 [7] (Sanky J).

<sup>128</sup> National Research Council, above n 2, 94.

<sup>129</sup> *Ibid* 95.

<sup>130</sup> Edmond, above n 26, 1.

preoccupation with discerning specialised knowledge. The Court's reluctance to read reliability into s 79(1) of the *Evidence Act*, also intimates great 'confidence'<sup>131</sup> in Australia's adversarial and accusatorial systems.

Yet in emerging disciplines, expert opinion will likely be of unknown reliability. Without recourse to objective methods of scrutiny, a tribunal of fact — applying its ordinary knowledge and experience — will be unable to evaluate novel or unconventional techniques in a comprehensive manner.<sup>132</sup> This risks such evidence being afforded more weight than can rationally be sustained.<sup>133</sup> Inferring reliability into admissibility standards for expert evidence merely extrapolates dictum, which conflates 'knowledge' with a 'body of ideas inferred from such facts or accepted as truths on good grounds'.<sup>134</sup>

Developing the s 79(1) test will protect against the 'perceived infallibility of forensic science'<sup>135</sup> and minimise error in the interpretation of evidentiary information.<sup>136</sup> It will also regulate case-by-case appraisal of the evidential bases of expert opinion.<sup>137</sup> A further safeguard against possible miscarriages of justice, a test of reliability will ensure the standards governing admissibility of expert evidence in Australia are au courant and sufficiently scrupulous.

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<sup>131</sup> National Research Council, above n 2, 10.

<sup>132</sup> Wilson, above n 53, 446.

<sup>133</sup> Edmond, above n 26, 13; *Pownall v Conlan Management Pty Ltd* (1995) 12 WAR 370 (FC); Heydon, above n 47, 973.

<sup>134</sup> *Daubert v Merrell Dow Pharmaceuticals Inc* (1993) 509 US 579, 590; *R v Tang* (2006) 65 NSWLR 681, 712 [138] (Spigelman CJ); *Honeysett* (2014) 311 ALR 320, 325 [23].

<sup>135</sup> Wilson, above n 54, 430.

<sup>136</sup> National Research Council, above n 2, 236.

<sup>137</sup> Heydon, above n 47, 970.

