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# JUDICIAL FACT-FINDING: TRIAL BY JUDGE ALONE IN SERIOUS CRIMINAL CASES

VICKI WAYE\*

*[The ability to choose between trial by jury and trial by judge alone in some jurisdictions presupposes a rational basis for exercising the choice. In this article, the author examines judicial fact-finding modalities from comparative and systemic perspectives. The conclusion drawn is that both judicial fact-finders and lay fact-finders process their decision-making similarly. In both instances, fact-finding involves the assimilation of disparate and sometimes complex information. In each case, the drawing of inferences is, of necessity, dependent upon heuristic reasoning. Furthermore, the application of principles of law to proven facts is inexact. However, there are a number of inbuilt safeguards in judicial fact-finding that promote rationality and inhibit cognitive illusion.]*

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## I INTRODUCTION

There have been a number of studies undertaken that compare the role of judge and jury as fact-finders in criminal cases.<sup>1</sup> The primary purpose of these studies has been to evaluate the jury as an arbiter of justice. Such evaluation has occurred by benchmarking decision-making by jury against decision-making by judges and other legal professionals. Consequently, the studies have been premised upon the notion that judicial decision-making is more likely to accord with the law and its rationales. On a positivist conception of the law, that premise is not ill-founded. Judges are expected to make their decisions when facts are found that come within the rubric of normative standards located in statutes and judicial precedent. The propriety of judicial decision-making is evaluated in terms of the judiciary's fidelity to this role. Being accountable on this basis, it is contended that judges take a less personalised view of the parties and the cases that appear before them than do lay jurors.<sup>2</sup> By contrast, jurors who are neither part of, nor allied to, the officialdom of the court system bring their own personal values to the decision-making process. Jurors are not constrained by legal reasoning. Indeed, unlike judges,<sup>3</sup> jurors are not required to provide any logically coherent and compelling reasons for their decisions.

However, there are difficulties in characterising judges as impersonal mouthpieces of the law. If this were so, there would be no need for provisions designed to prevent 'judge shopping' in statutes that permit an accused to elect to proceed to trial by judge alone.<sup>4</sup> While judges must provide reasons that conform to applicable normative standards, there is considerable scope for individual differentiation among the judiciary.

Judicial approaches to decision-making in serious criminal cases can vary on a number of interrelated levels: systemic; interpretation and application of normative standards; and fact-finding.

The purpose of this article is to examine judicial fact-finding processes. The examination is undertaken in the context of the accused's right to elect to

<sup>1</sup> Harry Kalven Jr and Hans Zeisel, *The American Jury* (1966); John Baldwin and Michael McConville, *Jury Trials* (1979); Kevin Clermont and Theodore Eisenberg, 'Trial by Jury or Judge: Transcending Empiricism' (1992) 77 *Cornell Law Review* 1124; John Jackson and Sean Doran, *Judge without Jury: Diplock Trials in the Adversary System* (1995); Reid Hastie and W Kip Viscusi, 'What Juries Can't Do Well: The Jury's Performance as a Risk Manager' (1998) 40 *Arizona Law Review* 901; Richard Lempert, 'Why do Juries Get a Bum Rap? Reflections on the Work of Valerie Hans' (1998) 48 *DePaul Law Review* 453; Neil Vidmar, 'The Performance of the American Civil Jury: An Empirical Perspective' (1998) 40 *Arizona Law Review* 849; Roselle Wissler, Allen Hart and Michael Saks, 'Decisionmaking about General Damages: A Comparison of Jurors, Judges, and Lawyers' (1999) 98 *Michigan Law Review* 751; Shari Seidman Diamond and Neil Vidmar, 'Jury Room Ruminations on Forbidden Topics' (2001) 87 *Virginia Law Review* 1857; Jury Research Institute, *Jury Deliberations: What Goes on behind Closed Doors* (2002) <<http://www.jri-inc.com/article3.htm>>.

<sup>2</sup> Jackson and Doran, *Judge without Jury*, above n 1, 223.

<sup>3</sup> As to the United States, see *Federal Rules of Criminal Procedure* r 23(c). As to Australia, see *Fleming v The Queen* (1998) 197 CLR 250; *R v Keyte* (2000) 78 SASR 68; *R v Murphy* [2000] NSWCCA 297 (Unreported, Spigelman CJ, Grove and Kirby JJ, 23 August 2000); *Criminal Code* (WA) s 651B(2); *Criminal Procedure Act 1986* (NSW) s 133(2); *Supreme Court Act 1933* (ACT) s 68C(2).

<sup>4</sup> See *Criminal Procedure Act 1986* (NSW) s 132(4); *Supreme Court Act 1933* (ACT) s 68B(1)(c); *Criminal Code* (WA) s 651A(4).

proceed to trial by judge alone in serious criminal cases. This context is a particularly useful one because the judicial participants have a unique ability to compare their role as an arbiter of the law and as an arbiter of the facts and the law.

The examination also compares judicial fact-finding in diverse jurisdictions. A comparison of the work of the judiciary in bench trials in two different jurisdictions provides an indication of the importance of cultural or environmental factors in the fact-finding process. Accordingly, discussion of the varying approaches taken by the judiciary to the above tasks begins from this systemic perspective. The two jurisdictions chosen for examination are:

- 1 South Australia, where trial by judge alone has been available since 1984; and
- 2 Oregon, United States, where the right to waive jury trials has been recognised in courts exercising federal jurisdiction since the decision of the United States Supreme Court in *Patton v United States*<sup>5</sup> in 1929 and in state cases under the *Oregon Constitution* since 1932.<sup>6</sup>

The article then goes on to examine the fact-finding processes adopted by the judiciary in each jurisdiction, noting the contribution of behavioural science studies to legal decision-making.

## II WHEN CAN THE DEFENDANT ELECT TO PROCEED BY JUDGE ALONE?

### A Australia

As a result of the constitutional requirement for trial by jury of Commonwealth indictable offences,<sup>7</sup> defendants can only elect to be tried by judge alone when charged with a state indictable offence.<sup>8</sup> Four Australian state jurisdictions permit persons prosecuted with serious criminal charges to choose trial by judge alone. These jurisdictions are: South Australia;<sup>9</sup> New South Wales;<sup>10</sup> Australian Capital Territory;<sup>11</sup> and Western Australia.<sup>12</sup>

In South Australia,<sup>13</sup> New South Wales<sup>14</sup> and the Australian Capital Territory,<sup>15</sup> the trial judge must be satisfied that the accused has received advice from a legal practitioner in relation to the decision to proceed by judge alone.

<sup>5</sup> 281 US 276 (1930).

<sup>6</sup> *Constitution of Oregon* art 1, § 11.

<sup>7</sup> *Australian Constitution* s 80.

<sup>8</sup> *Brown v The Queen* (1986) 160 CLR 171.

<sup>9</sup> *Juries Act 1927* (SA) s 7.

<sup>10</sup> *Criminal Procedure Act 1986* (NSW) s 132.

<sup>11</sup> *Supreme Court Act 1933* (ACT) s 68B.

<sup>12</sup> *Criminal Code* (WA) s 651A–C.

<sup>13</sup> *Juries Act 1927* (SA) s 7(1)(b).

<sup>14</sup> *Criminal Procedure Act 1986* (NSW) s 132(1)(b).

<sup>15</sup> *Supreme Court Act 1933* (ACT) s 68B(1)(b).

### B Oregon

In the United States, as in Australia, most criminal justice activity occurs at the state, rather than at the federal, level. It is estimated that state courts hear 85–95 per cent of criminal cases.<sup>16</sup> The constitutional right to waive a jury trial in state matters only applies to non-capital cases. Unlike proceedings in federal matters, the prosecution has no right to veto a defendant's election to proceed without a jury.<sup>17</sup>

## III THE DECISION TO PROCEED BY JUDGE ALONE

In Kalven and Zeisel's seminal work, *The American Jury*,<sup>18</sup> several factors were listed as influential upon the defendant's decision to waive a jury in a criminal case: regional custom; crime category; defendant's character; media; process; and nature of defence.

### A Regional Custom

Kalven and Zeisel noted that regional custom was the primary determinant and that custom in respect of jury waiver varied enormously between American states.<sup>19</sup> For the purpose of this article, the author studied statistics from the Oregon Circuit Court in Eugene, Oregon and from the Adelaide Registry of the South Australian District and Supreme Courts. In the Oregon Circuit Court, which exercises state jurisdiction over criminal matters, approximately 30 per cent of trials proceed as bench trials.<sup>20</sup> In the South Australian District and Supreme Courts, by contrast, only three to five per cent of serious criminal trials are heard by judge alone.<sup>21</sup>

### B Crime Category

Kalven and Zeisel found a correlation between crimes with a high rate of guilty pleas and trials that proceeded by judge alone.<sup>22</sup> Where a guilty plea was

<sup>16</sup> Gerald Robin, *Introduction to the Criminal Justice System* (3<sup>rd</sup> ed, 1987) 186.

<sup>17</sup> *State v Baker*, 976 P 2d 1132 (Or, 1999).

<sup>18</sup> Kalven and Zeisel, above n 1, 24–30. See also Orville Richardson, 'Jury or Bench Trial? Considerations' (1983) 19(9) *Trial* 58.

<sup>19</sup> For example, in Wisconsin and Connecticut, defendants chose to proceed by judge alone in 75 per cent of cases, whereas in Montana and the District of Columbia, trial by jury was hardly ever waived. More recent figures outlining regional variations in the United States are set out in Sean Doran, John Jackson and Michael Seigel, 'Rethinking Adversariness in Nonjury Criminal Trials' (1995) 23 *American Journal of Criminal Law* 1, 8–11. Similar regional variations have also been observed in Canada: see Lee Stuesser, 'Lawyers Judge the Jury' (1990) 19 *Manitoba Law Journal* 52, 62–3.

<sup>20</sup> Based on records supplied by Laura Ritenour, Administrative Analyst, Oregon Circuit Court, Eugene, Oregon (copy on file with author).

<sup>21</sup> Based on records at the Criminal Registry, South Australian District and Supreme Courts, (summary on file with author). This figure accords with New South Wales Bureau of Crime Statistics and Research data on New South Wales, where the accused may also elect to proceed by judge alone (copy on file with author).

<sup>22</sup> See also Stephen Schulhofer, 'Is Plea Bargaining Inevitable?' (1984) 97 *Harvard Law Review* 1037, 1062–4, associating high bench trial rates with the willingness of local trial judges to give discounted sentences in exchange for jury waiver.

likely because of the type of crime charged, jury waiver was also likely. Crime category was also relevant where the type of crime charged was likely to engender negative sympathy toward the defendant. For example, Kalven and Zeisel noted that sexual crimes against women and children were more likely to be tried by judge alone.<sup>23</sup> This is confirmed by figures obtained from the Criminal Registry of the South Australian District and Supreme Courts, and also from comparative figures from New South Wales superior courts. Approximately 25 per cent of cases heard by judge alone in these jurisdictions involved some form of sexual assault.<sup>24</sup>

### C *Defendant's Character*

Defendants with known prior convictions were more likely to choose trial by judge alone than those defendants without criminal antecedents.<sup>25</sup>

### D *Media*

Defendants were likely to choose trial by judge alone where preceding media publicity might render the jury unsympathetic.<sup>26</sup> Traditionally, judges have been regarded as less affected by prejudicial material than jurors in determining the guilt of an accused.<sup>27</sup>

Nevertheless, there have been warnings that intuitive views regarding judicial immunity to community pressure may be over-sanguine. Cases that engender community outcry because of their shocking facts are likely to place difficult fact-finding burdens on judges whose opinions are later open to scrutiny and criticism when reasons for judgment are published.<sup>28</sup>

### E *Process*

Other authors have noted that matters related to process might also be relevant, especially in jurisdictions that experience a high rate of trial by judge alone.<sup>29</sup> The cost and delay associated with a jury trial were regarded as a deterrent to jury trial, particularly where the accused was in custody awaiting trial.

<sup>23</sup> Paradoxically, sexual assault cases which turn on issues of consent or identity are also considered ideal fact-finding cases for a jury: Stuesser, above n 19, 74. Stuesser noted that where there were no aggravating factors, such as use of violence or multiple assailants, Canadian lawyers tended to advise clients to opt for a jury trial: at 74.

<sup>24</sup> Statistics on file with author. An earlier study also found that trials involving sexual assaults comprised a majority of the cases heard by judge alone: Carolyn Harrison, 'Redefining Justice?: Trial by Judge Alone' (unpublished paper, undated) (copy on file with author).

<sup>25</sup> Kalven and Zeisel, above n 1, 24; Justice J Badgery-Parker, 'The Criminal Process in Transition: Balancing Principle and Pragmatism — Part II' (1995) 4 *Journal of Judicial Administration* 193, 198.

<sup>26</sup> Kalven and Zeisel, above n 1, 24; John Willis, 'Trial by Judge Alone' (1998) 7 *Journal of Judicial Administration* 144, 153–4.

<sup>27</sup> New South Wales Law Reform Commission, *Criminal Procedure: The Jury in the Criminal Trial*, Report No 48 (1986) 101; Law Reform Commission of Western Australia, *Review of the Civil and Criminal Justice System in Western Australia*, Report No 92 (1999) 257–60.

<sup>28</sup> Willis, above n 26, 154.

<sup>29</sup> See, eg, Stuesser, above n 19, 72.

Conversely, in South Australia, the right of the prosecution to appeal against an acquittal procured by way of a bench trial<sup>30</sup> constitutes a procedural deterrent against jury waiver. The prosecution may only appeal against the sentence where a conviction has been procured by a jury verdict.<sup>31</sup> The prosecution cannot appeal against a jury acquittal. By contrast, in Oregon, the state's right of appeal is limited to matters arising from the validity of the accusatory instrument and errors related to the pre-trial suppression of evidence.<sup>32</sup>

### F *Nature of Defence*

If the defence raised by the accused was a 'technical' defence based upon a narrow application of black letter law, lawyers were often more prepared to advise an election for a bench trial.<sup>33</sup>

## IV FEATURES OF THE JUDICIARY

Much of the information discussed in this article is drawn from a survey of several judges from the Circuit Court in Eugene, Oregon and from the South Australian District Court and Supreme Court. A copy of the survey questions and a summary of responses are attached to the article.<sup>34</sup> The survey was undertaken on a voluntary basis and was directed toward judges who had participated in bench trials in serious criminal cases. Five judges from the Circuit Court in Eugene, Oregon, four judges from the District Court of South Australia and two judges from the Supreme Court of South Australia participated by way of personal interview with the author. All judges who took part in the survey did so on the condition that their identities would not be disclosed. Notes of the interviews are on file with the author.

### A *Court Structure*

#### 1 *Eugene, Oregon: Circuit Court*

The Circuit Court in Eugene, Oregon is a superior court of general state jurisdiction, which extends to cases involving serious criminal charges. It comprises 15 judges, 11 of whom are male and four of whom are female. Circuit Court judges are elected on a non-partisan ballot and sit for terms of six years. To be eligible for election, the Circuit Court candidate must be a United States citizen, a member of the Oregon State Bar,<sup>35</sup> a resident of Oregon for at least three years and a resident in the relevant judicial district for at least one year.<sup>36</sup>

The jurisdiction of the Circuit Court in Eugene is much smaller in population and geographic area than the District and Supreme Courts of South Australia.

<sup>30</sup> *Criminal Law Consolidation Act 1935* (SA) s 352(1)(ab).

<sup>31</sup> *Criminal Law Consolidation Act 1935* (SA) s 352(1)(a)(iii).

<sup>32</sup> OR REV STAT § 138.060(2) (2001).

<sup>33</sup> Stuesser, above n 19, 72.

<sup>34</sup> See below Part VIII.

<sup>35</sup> OR REV STAT § 3.050 (2001).

<sup>36</sup> OR REV STAT § 3.041 (2001).

Eugene's population is 137 000. The Circuit Court in Eugene services Lane County, Oregon, which has a total population of 323 000.

## 2 *South Australia: District Court and Supreme Court*

The District Court and Supreme Court of South Australia are located in Adelaide, the capital of South Australia. These courts also travel on circuit to Mount Gambier and Port Augusta, other regional South Australian centres.

The District Court comprises 19 judges, one of whom is female. The District Court is South Australia's primary trial court, exercising jurisdiction over civil claims, criminal charges, administrative review and criminal injuries claims. It has jurisdiction to hear serious criminal matters except for murder and treason.

There are 14 judges who sit in the Supreme Court, one of whom is female. The Supreme Court is the highest court of South Australia. It exercises both original and appellate jurisdiction. It can hear serious criminal charges and has exclusive jurisdiction to try murder and treason charges.

## B *Judiciary*

### 1 *South Australia*

As a result of the manner of their appointment, the protocol surrounding their office, and the lack of understanding within the community regarding the nature of their work, South Australian judges seem more remote from the life and culture of the average person than their Eugene counterparts. Judges in the District Court and Supreme Court are formally appointed by the South Australian Governor, acting on advice from the South Australian executive.<sup>37</sup> The Attorney-General, a member of the South Australian government, puts forward initial nominations for appointment.

South Australian judges are appointed 'during good behaviour'<sup>38</sup> and can only be removed by the Governor acting upon advice from both houses of Parliament.<sup>39</sup> Otherwise judges must retire at 70 years of age.<sup>40</sup> The average age of Australian judges is 59 years.<sup>41</sup>

Traditionally, the Australian judiciary has been distant from the public. Judges presiding over criminal trials in the District and Supreme Courts are formally robed and wear horsehair wigs. They sit in an elevated position at the front of the court behind a high bench.<sup>42</sup> Robing, wigs and the bench preserve anonymity and thus independence.

When not sitting in court, judges speak to outsiders through their staff. District Court and Supreme Court judges have secretaries and associates. Supreme Court justices also have tipstaves. Judges are further protected by a contingent of

<sup>37</sup> James Crawford, *Australian Courts of Law* (3<sup>rd</sup> ed, 1993) 61.

<sup>38</sup> *Constitution Act 1934* (SA) s 74.

<sup>39</sup> *Constitution Act 1934* (SA) s 75.

<sup>40</sup> *District Court Act 1991* (SA) s 16; *Supreme Court Act 1935* (SA) s 13A.

<sup>41</sup> Robert Thomson, *The Judges* (1987) 41. See also Enid Campbell and H P Lee, *The Australian Judiciary* (2001) 283.

<sup>42</sup> Thomson, above n 41, 30.

security staff. Although this phalanx of staff is necessary for judicial productivity and security, it further distances the judiciary from the community.

The South Australian community itself knows little about the work of the courts and of the judges. The jury system in criminal trials provides only a limited form of democratic participation in the administration of justice. Otherwise, most people enjoy modest contact with courts. Education about the rule of law and the role of legal institutions is limited to an elective final year subject at high school.

The distancing of Australian judges from the community is emphasised by the elite backgrounds of most judges. Approximately 80 per cent attended private schools.<sup>43</sup> The overwhelming majority of judges are white and male.<sup>44</sup> Consequently, the Australian judiciary has historically been identified as an elitist establishment.

Perversely, the view that Australian judges are elitist has not changed as the judiciary has become more activist. Cases such as *Mabo v Queensland [No 2]*<sup>45</sup> and *Minister of State for Immigration and Ethnic Affairs v Teoh*<sup>46</sup> have led to criticism that judges are implementing 'judicial reform' without the mandate of democratic election.<sup>47</sup> Far from endearing the judiciary to the public, the failure to conform to a conservative agenda has led to accusations that the judiciary is 'out of touch' with the realities of everyday Australian life.<sup>48</sup> Australians, who at least pay lip service to the spirit of egalitarianism,<sup>49</sup> regard elitism with disdain, whether due to conservative politics or intellectual radicalism.

South Australian courts have taken a number of steps to reduce the distance and alienation between the judiciary and the public. A public information office has been created to explain the role of the courts. Judges now participate in media interviews and arrangements can be made for them to speak to community groups.<sup>50</sup> School children can address their questions about the legal system directly to judges through a website entitled 'Ask the Judge'.<sup>51</sup> The South

<sup>43</sup> Ibid 38–9.

<sup>44</sup> Sean Cooney, 'Gender and Judicial Selection: Should There Be More Women on the Courts?' (1993) 19 *Melbourne University Law Review* 20. See also Margaret Thornton, *Dissonance and Distrust: Women in the Legal Profession* (1996) 294; Campbell and Lee, above n 41, 25, 281.

<sup>45</sup> (1992) 175 CLR 1. This case established common law recognition of native title to land.

<sup>46</sup> (1995) 183 CLR 273. This case established that administrative decision-making was subject to Australian international treaty obligations.

<sup>47</sup> See, eg, Chief Justice David Malcolm, 'The Garran Oration' (2001) 60(3) *Australian Journal of Public Administration* 3.

<sup>48</sup> Greg Craven, 'Judicial Activism in the High Court — A Response to John Toohey' (1999) 28 *University of Western Australia Law Review* 214; Chief Justice Murray Gleeson, 'Legal Oil and Political Vinegar' (1999) 73(5) *Law Institute Journal* 50. The author, however, does not agree with the proposition that judges should be responsive to community attitudes. Judicial independence requires that judges apply the law freely and without fear or favour.

<sup>49</sup> John Braithwaite, 'Economic Policy: What the Electorate Thinks' in Jonathan Kelley and Clive Bean (eds), *Australian Attitudes: Social and Political Analyses from the National Social Science Survey* (1988) 26, 32.

<sup>50</sup> Courts Administration Authority of South Australia, *Speakers* <<http://www.courts.sa.gov.au/community/index.html>>.

<sup>51</sup> Courts Administration Authority of South Australia, *Ask the Judge* <<http://www.courts.sa.gov.au>>.

Australian Courts Administration Authority has also hosted community forums about the role of the courts and judiciary.<sup>52</sup>

## 2 Eugene

Compared with residents of Eugene, however, the majority of South Australians remain less informed about the role and work of the judiciary. The judiciary in Eugene is better known in the community because of Eugene's comparatively small size and the professional profile of its population. Moreover, education about the role and work of the judiciary is universal and not confined to a small percentage of high school students.<sup>53</sup> Education about the judiciary has also been established for much longer than in South Australia. Indeed, the law and the invocation of legal rights are far more ingrained in American culture than in Australian culture.<sup>54</sup>

### C The Judiciary and the Bar

Given that legal advice is crucial to the decision to waive jury trial,<sup>55</sup> there are also important differences in the relationship between the judiciary and the Bar between the two jurisdictions. The size of the Bar in Eugene compared to Adelaide is small, and Eugene judges are well known to both prosecution and defence counsel. Moreover, given their mode of appointment, judges in Eugene are less likely to be perceived as associated with partisan politics than South Australian judges, who are appointed by the government.

When surveyed about their relationship with counsel in criminal bench trials, Eugene judges were of the view that the preservation of judicial neutrality and party control of the proceedings in the traditional adversarial sense<sup>56</sup> were highly important. Judicial intervention and managerialism were frowned upon as inconsistent with the right to due process, particularly in the criminal context. While judges from Eugene conceded that in civil trials they would be more likely to intervene if counsel was not presenting a party's case well, on the whole they were adamant that this was not appropriate in a criminal case. For example, judges from Eugene felt it was inappropriate to question witnesses directly except to clarify ambiguity in testimony, which would occur rarely. They felt it inappropriate to impose time limits for questioning or suggest whether an issue should be pursued or not. At most, incompetent counsel might be taken aside for the judge to suggest a different focus.

On the other hand, the behaviour of a South Australian judge in criminal matters tended to correlate with his or her behaviour in civil matters. A judge that tended to be interventionist in civil cases also tended to display similar charac-

<sup>52</sup> Courts Administration Authority of South Australia, 'Courts Consulting the Community' (Press Release, 9 November 2000).

<sup>53</sup> All Eugene high school children learn about the role of the judiciary in 'American Studies', a subject within social studies.

<sup>54</sup> Kermit Hall, William Wiecek and Paul Finkelman, *American Legal History: Cases and Materials* (2<sup>nd</sup> ed, 1996) 574.

<sup>55</sup> Stuesser, above n 19, 53.

<sup>56</sup> Jill Hunter and Kathryn Cronin, *Evidence, Advocacy and Ethical Practice: A Criminal Trial Commentary* (1995) ch 2.

teristics, albeit less markedly, in criminal bench trials. Similarly, a judge that tended to adopt a traditional, neutral role in civil cases also tended to adopt a neutral role in criminal bench trials. Those judges who displayed interventionist tendencies indicated that they were more likely to ask witnesses questions in bench trials than in jury trials. They also felt more comfortable directing counsel to pursue an issue in bench trials.

The lack of any distinct practice for trial by judge alone in South Australia probably accords with the very low rate of bench trial overall. Trial by judge alone is so rare that South Australian judges have not developed a distinct style of procedure, as observed by Doran and Jackson in Northern Ireland.<sup>57</sup>

#### D Cultural Factors

Eugene and Adelaide share many cultural features:

- a democratic political system dominated by liberal politics;
- a large, well-educated middle class;
- a frontier, pioneering history;
- a well-established and well-patronised arts community; and
- an economic base which historically relied upon agriculture and resources but which has diversified into other industries, such as manufacturing, electronics and chemicals.

However, Eugene's population is more homogenous and professionalised than the population serviced by the District and Supreme Courts of South Australia. Ninety per cent of the population in Eugene is white non-Hispanic.<sup>58</sup> A high percentage of the population is comprised of doctors, lawyers, architects and educators. The University of Oregon and the Hult Center for Performing Arts play a central role in Eugene's cultural life.

Adelaide has a population of 1 067 300 people or 73 per cent of the total state population.<sup>59</sup> Approximately 22 per cent of people living in Adelaide were born overseas, with the majority of those coming from European countries.<sup>60</sup> Approximately 14 per cent of the population has a tertiary qualification.<sup>61</sup>

Eugene's more professionalised demographic may partly explain the higher rate of bench trial in the Lane County Circuit Court, compared with the very low rate of bench trial in South Australia. The Eugene judiciary is far more likely to identify with, and consequently not be as alienated from, a highly professionalised population than their South Australian counterparts.

<sup>57</sup> Jackson and Doran, *Judge without Jury*, above n 1, ch 7. See also John Jackson and Sean Doran, 'Conventional Trials in Unconventional Times: The Diplock Court Experience' (1993) 4 *Criminal Law Forum* 503, 513.

<sup>58</sup> Social Science Data Analysis Network, *Segregation: Neighborhood Exposure by Race*, CensusScope <[http://www.censuscope.org/us/s41/p23850/chart\\_exposure.html](http://www.censuscope.org/us/s41/p23850/chart_exposure.html)>.

<sup>59</sup> International Public Affairs Branch, Department of Foreign Affairs and Trade, *Australian States: South Australia* (1994).

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

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

## V APPROACHES TO APPLICATION OF LEGAL STANDARDS

Very few modern legal philosophers would agree that the application of legal standards by the courts is a simple process of fitting rules to facts.<sup>62</sup> If that were so, then different judges would make identical decisions in like cases<sup>63</sup> and the dispensation of justice would become a mechanised process. On the contrary, there is a considerable body of academic literature contending that the application of legal rules by judges combines both discretionary and rules-based elements.<sup>64</sup> Consequently, the claim that judges cannot readily depart from legal rules, whereas juries can, requires examination.

When considering the application of legal rules by any fact-finder, the first matter to note is that the application of legal rules and the fact-finding process cannot easily be separated. The process of fact-finding is generated by the legal principles that the parties ultimately hope to persuade the fact-finder to apply. Legal standards determine the appropriate method of proof. They confine the scope of significant facts and the relative weight that should be given to particular facts. They also determine what legitimate inferences may be drawn from facts and conjunctions of fact to produce other factual and legal conclusions.

Furthermore, the fact-finding process involves interpretation in light of knowledge about the law and the legal system within which that fact-finding occurs. Even where factual matters have equivalent well-grounded meaning in other fields of knowledge, the method by which they are used by the fact-finder becomes transformed by the legal setting. The deviation between the legal concept of intention and its equivalent moral meaning in the community evidences this phenomenon. Intention in the criminal law refers to the defendant's willingness to commit the conduct elements of an offence.<sup>65</sup> This is distinct from a desire to bring about the result that the proscribed conduct produces. For example, when one is drinking heavily, the known consequence is a hangover. Yet it would be unusual for a heavy drinker to intend to produce a hangover. Usually the heavy drinker is seeking the pleasure and relaxation associated with alcohol or, in extreme cases, alcoholic oblivion. In criminal law, intention in these circumstances would affix to the drinker's intention to imbibe alcohol. But

<sup>62</sup> Frederic Reynold, *The Judge as Lawmaker* (1967); John Rawls, *A Theory of Justice* (revised ed, 1999); Ronald Dworkin, *Taking Rights Seriously* (1978) 14–80; Richard Ingleby and Richard Johnstone, 'Judicial Decision Making' in Rosemary Hunter, Richard Ingleby and Richard Johnstone (eds), *Thinking about Law: Perspectives of the History, Philosophy and Sociology of the Law* (1995) 174.

<sup>63</sup> Experience dictates otherwise: see, eg, T S Palys and Stan Divorski, 'Judicial Decision-Making: An Examination of Sentencing Disparity among Canadian Provincial Court Judges' in Dave Müller, Derek Blackman and Anthony Chapman (eds), *Psychology and Law: Topics from an International Conference* (1984) 333, 339. This study concludes that the great disparity observed in the sentencing decisions of Canadian judges was largely due to differences in values regarding deterrence and protection versus rehabilitation. See also Jorge Sobral Fernández, 'An Enquiry into Judicial Decisions' in Santiago Redondo et al (eds), *Advances in Psychology and Law: International Contributions* (1997) 227.

<sup>64</sup> See Lee Ann Fennell, 'Between Monster and Machine: Rethinking the Judicial Function' (1999) 51 *South Carolina Law Review* 183; Ronald Cass, 'Judging: Norms and Incentives of Retrospective Decision-Making' (1995) 75 *Boston University Law Review* 941.

<sup>65</sup> Law Book Company, *Laws of Australia*, vol 9 (at 23 July 2003) 9 Criminal Law Principles, '9.1 The Criminal Laws' [251].

in other, non-legal contexts, intention might be equated with a desire to bring about a particular result. When asking why someone got drunk, for example, we do not usually respond, 'Because they had the intention to get to imbibe a lot of alcohol'.<sup>66</sup> Yet that information would be important to determine whether someone deliberately overindulged in alcohol or was drunk because they were an inexperienced drinker with little skill in judging their capacity to handle alcohol.

Conversely, interpretation of a legal term is subject to the cultural and social mores of the community in which it is applied. Appellate case law shows significant correlation between the criminal law notion of intention and the assignment of blame. For instance, in *R v Crabbe*, the High Court of Australia specifically alluded to non-morally blameworthy intention when it raised as an example the case of a surgeon who administers medical treatment, appreciating that death is probable as a result.<sup>67</sup> Notwithstanding the likelihood of death, the High Court stated that in that instance the surgeon would not have the requisite intention to kill.<sup>68</sup> By contrast, in *R v Watson*, the Queensland Court of Criminal Appeal refused to permit the Palm Island cultural practice of allowing husbands to physically punish disobedient wives to be used as evidence that the defendant husband did not intend to harm his wife when he cut her with a knife.<sup>69</sup>

Philosophers have described the above as the doctrine of double effect.<sup>70</sup> Under this doctrine, the distinction between intention and foresight is more important to the assignment of praise than to blame. Where the act is morally blameworthy, as in *Watson*, the distinction between intention and foresight is less delineated than in the case where the act undertaken is morally praiseworthy, as in *Crabbe*. Thus, a business manager who causes his or her company to pursue a profit-making strategy that incidentally produces environmentally beneficial effects will not have intended to cause that company to act in an environmentally beneficial manner. However, a business manager who causes his or her company to pursue a profit-making strategy, knowing that this will lead to environmental harm, will be viewed as possessing the intention to cause that harm.

Any model of legal decision-making that strictly bifurcates the application of legal rules from fact-finding is likely to mask the latent evaluative content of legal rule application. Consequently, as it is impossible to completely disentangle the strands of fact-finding, legal norms and social and moral decision-making, it is difficult to mathematically model the manner in which judges, let alone juries, make their determinations. Indeed, insofar as the application of legal principles to the facts is concerned, there is very little evidence of the comparative rectitude of judges and juries. Kalven and Zeisel found that judges and juries usually

<sup>66</sup> See Bertram Malle and Joshua Knobe, 'The Distinction between Desire and Intention: A Folk-Conceptual Analysis' in Bertram Malle, Louis Moses and Dare Baldwin (eds), *Intentions and Intentionality: Foundations of Social Cognition* (2001) 45, 64.

<sup>67</sup> (1985) 156 CLR 464, 470 (Gibbs CJ, Wilson, Brennan, Deane and Dawson JJ) ('*Crabbe*').

<sup>68</sup> *Ibid.*

<sup>69</sup> [1987] 1 Qd R 440, 464 (Dowsett J) ('*Watson*').

<sup>70</sup> Alfred Mele, 'Acting Intentionally: Probing Folk Notions' in Bertram Malle, Louis Moses and Dare Baldwin (eds), *Intentions and Intentionality: Foundations of Social Cognition* (2001) 27, 29–30.

agreed on trial verdicts.<sup>71</sup> This was also the view of the judges from Oregon and South Australia when questioned about any jury verdicts with which they disagreed. Most indicated that there were no, or only very rare, occasions when they disagreed with the jury verdict.

Some of the literature arguing in favour of jury decision-making has posited that juries can militate against harsh results caused by the inflexible application of legal rules.<sup>72</sup> For example, jurors may refuse to enforce repugnant laws or refuse to enforce the law where the result may conflict with community values.<sup>73</sup> Yet, in the absence of jury accountability, it is difficult to determine whether this form of 'jury equity' is based upon morally proper considerations or, as one author puts it, simply upon the charm of counsel in the case.<sup>74</sup> Moreover, juror nullification may also yield obverse results: a jury convicting or acquitting upon a morally objectionable basis.<sup>75</sup>

Judges from Eugene and South Australia diverged when discussing whether they felt constrained to produce a verdict consistent with a strict application of the law. Eugene judges expressed stronger fidelity to a strict application of the law than their South Australian counterparts. The Eugene judges made it clear that if there were a divergence between the law and what they viewed as a just outcome, they would apply the law regardless. Nonetheless, it was unclear whether the Eugene judiciary ever found itself in the position of having to do so. The views expressed by the judges could therefore reflect perceived expectations of their proper role, rather than actual practice. However, because these views were expressed so strongly, this may be a ground for a different view of judicial performance in bench trials by defendants and their counsel. If defendants and their counsel believe that judges may convict or acquit on a different basis to lay fact-finders, this provides an explanation for choosing to proceed by bench trial, whether or not the judiciary conform to these expectations.

In South Australia, judges tended to be more relaxed about problems associated with a divergence between the law and 'justice'. They tended not to regard the law as an overly constraining factor when applying the law to the facts. Rather, the South Australian judges expressed the view that they could fashion

<sup>71</sup> Kalven and Ziesel, above n 1, 63–4. See also Clermont and Eisenberg, above n 1, 1152–6; Marc Galanter, 'The Civil Jury as Regulator of the Litigation Process' [1990] *University of Chicago Legal Forum* 201, 204–5.

<sup>72</sup> Mark Findlay et al, *Jury Management in New South Wales* (1994) 8; Mark Findlay, Stephen Odgers and Stanley Yeo, *Australian Criminal Justice* (2<sup>nd</sup> ed, 1999) 152–3.

<sup>73</sup> Law Reform Commission of Western Australia, *Review of the Criminal and Civil Justice System in Western Australia: Consultation Drafts* (1999) 927.

<sup>74</sup> Penny Darbyshire, 'The Lamp that Shows that Freedom Lives — Is It Worth the Candle?' (1991) *Criminal Law Review* 742, 751. In a report prepared by the International Society for the Reform of Criminal Law, it was reported that juries would routinely fail to act upon 'compelling police evidence' in the English courts in the 1970s because of community views of police 'verballing' and 'planting': International Society for the Reform of Criminal Law, *Jury Project Discussion Paper* (2000) 15.

<sup>75</sup> See, eg, *R v Young* [1995] QB 324. In this case, the Court of Appeal received affidavit evidence from all 12 jurors that while housed overnight in a hotel during their deliberations, four of the jurors indulged in an ouija board seance to contact the deceased victim to find out whether the defendant was guilty of murder.

the application of the law to their own view of a proper outcome.<sup>76</sup> They expressed the view that the law was sufficiently open-ended to produce a just result when required. For South Australian judges, the law itself was just and therefore tended to produce a just outcome. As a result, there was little or no conflict between its application and their personal mores.

The divergence of opinion between the two groups of judges is ironic given that South Australian judges are required to provide substantive written reasons for their verdicts that are open to appellate dissection and review,<sup>77</sup> whereas Eugene judges are not. The wider basis of appellate review regarding the application of the law does not, it appears, cause South Australian judges to feel that they are limited in how they should apply the law.

In fact, both approaches disguise judicial subjectivity. In the first instance, the Eugene judges appear to be abrogating responsibility where notions of justice and the law do not coincide. By embracing legalism as justification for failing to do justice, Eugene judges project that social justice does not lie within their mandate. In the second instance, by equating law and justice, South Australian judges project that individual judgment about appropriate outcomes becomes sublimated within the institutional framework of the law. Individualistic departure from the text of the law runs counter to the ideal of judicial legitimacy. While jurors, who remain anonymous representatives of the people, are expected to act according to conscience, the rhetoric of judicial authority requires otherwise.

However, while judges produce written reasons that accord with the terms of a pertinent legal text, there is no evidence that they adopt a less normative approach to the application of legal rules than jurors. To contend that judges are merely conduits for a fixed legal text presupposes a number of untenable assumptions: that the relevant legal rules can be identified with clarity,<sup>78</sup> a particular legal rule does exist for every given fact situation,<sup>79</sup> the law comprises a set of systematic, logical and inherently coherent rules,<sup>80</sup> once a legal rule has been identified, its application to the proven facts is necessarily straightforward;<sup>81</sup> and knowledge of past events is perfectly attainable through the process

<sup>76</sup> See Duncan Kennedy, 'Freedom and Constraint in Adjudication: A Critical Phenomenology' (1986) 36 *Journal of Legal Education* 518 for an exposition of the relationship between the application of legal rules and the judge's personal preferences.

<sup>77</sup> *R v Winner* (1995) 79 A Crim R 528, 534 (Kirby ACJ, Newman J, Barr AJ). Failure to give sufficient reasons amounts to an error of law: see, eg, *R v Keyte* (2000) 78 SASR 68; *R v Green* (2001) 78 SASR 463; *R v McKenzie* [2001] SASC 279 (Unreported, Olsson, Perry and Gray JJ, 31 August 2001).

<sup>78</sup> In areas of evolving common law, for example, there may be a number of conflicting precedents and no clearly identifiable legal principle.

<sup>79</sup> As a result of historical development, there may be no rule to apply to novel situations.

<sup>80</sup> The common law method generates rules on a case by case basis. The function of the judge in the common law system is to render justice, not to formulate a series of social norms. There is no mechanism for ensuring that legal rules comprise a set of systematic, synergistic and logically coherent body of norms: see René David and John Brierley, *Major Legal Systems in the World Today: An Introduction to the Comparative Study of Law* (3<sup>rd</sup> ed, 1985) 360–1. Rules with varying rationales commonly overlap and provide different remedies, for example, the intersection of contract, tort and trade practices law in many commercial cases.

<sup>81</sup> Legal rules are not individuated. To fulfil their function as useful limits and guides, legal rules must be generalised and open-ended: see William Twining and David Miers, *How to Do Things*

of proof.<sup>82</sup> Within the scope of the adversarial presentation of facts, the bounds of precedent and the limits of the judicial mandate, the act of judgment is a creative act.<sup>83</sup> Reasons for judgment enable judges to persuade others of the propriety of their decision-making<sup>84</sup> and facilitate accountability rather than devotion to an immutable text.

## VI FACT-FINDING

It is a trite observation that the marshalling, assimilation and digestion of evidence into determinations of fact are complex and difficult processes. Like all forms of complex decision-making, judicial fact-finding requires the integration of multiple, fallible, incomplete and conflicting items of evidence to draw inferences about past events. Evidence garnered on an *ex post facto* basis is neither true nor false, but uncertain. Inferences linking evidence do not depend on empirically validated assumptions, but upon commonsense knowledge constructed according to experience and learning. Conclusions are not merely the sum of each individual item of evidence and the inferential links between them. They are dependent upon the variable weight attached to each item of evidence and the relative strength of the inferential links between the evidence, as well as the plausibility of the overall narrative of each party's case. Determining the weight that should be attached to evidence, and the relative reliance that ought to be placed on various inferences, cannot be objectified because the probabilities underpinning the inferences are unknown.<sup>85</sup>

Moreover, there are few benchmarks to determine whether a fact-finding decision is good or bad. In South Australia, appeals from bench trials are

*with Rules* (4<sup>th</sup> ed, 1999) 200–4. Consequently, the application of any legal rule to a proven fact situation must depend on the decision-maker's judgment regarding the meaning of the rule and its fit to the situation. For example, a legal rule may prohibit being drunk in a public place. A decision-maker may be required to determine the following: is a driveway leading onto a road once it passes the footpath maintained by the local council a public place? Does having a blood alcohol level of .08 constitute being drunk? Does being drunk require the exhibition of certain behaviour? If so, what sort of behaviour?

<sup>82</sup> Our knowledge of past events is uncertain. The process of proof can only provide a limited understanding of past events because of the delay between the event and trial, the adversarial generation and presentation of evidence, and the courtroom setting and rules of evidence and procedure regarding how facts may be proven.

<sup>83</sup> Justice Michael Kirby, *The Judges* (1983) ch 5.

<sup>84</sup> Sandra Berns, *To Speak as a Judge: Difference, Voice and Power* (1999) 60–3.

<sup>85</sup> For example, if a witness testified that the gun used to kill the victim was a .22 rifle with a silencer, we would only be able to estimate vaguely the correctness of that statement by reference to the witness's experience with guns, the distance between the witness and the gun, the witness's veracity and so on. We would not be able to assign a probability to that evidence other than in the most general terms; it is more probable than not that the witness is telling the truth and is not mistaken, or it is highly probable or highly improbable that the witness is telling the truth and is not mistaken. See also Laurence Tribe, 'Trial by Mathematics: Precision and Ritual in the Legal Process' (1971) 84 *Harvard Law Review* 1329. *Contra* Michael Saks and Robert Kidd, 'Human Information Processing and Adjudication: Trial by Heuristics' (1980) 15 *Law and Society Review* 123, 123–60. The authors reject the notion that evidence is case-specific. They argue that most evidence is far more probabilistic than judges realise and that the veracity of evidence such as eyewitness testimony, fingerprints and so on can be accurately determined from base rate information rather than on a case-specific basis.

available if the appellant<sup>86</sup> can identify matters which affect the nature and quality of the evidence before the trial judge to the extent that the Court of Criminal Appeal is not convinced of the verdict beyond reasonable doubt.<sup>87</sup> The Court of Criminal Appeal will intervene where the verdict is unreasonable in the sense that, having regard to the evidence, no other reasonable fact-finder would have arrived at that verdict. In Eugene, appeals are available on a similar basis,<sup>88</sup> either because conviction upon insufficient evidence constitutes an error of law,<sup>89</sup> or because it violates the constitutional right of due process.<sup>90</sup> To survive appeal in either jurisdiction, therefore, the verdict must be rational.

Rationality emphasises the robustness of the decision-making process and also requires a substantive analysis of the content of the verdict. A rational decision will be logical and internally coherent, will be unaffected by the manner in which the decision-maker's choice is portrayed<sup>91</sup> and should incorporate probabilities so as to produce the best outcomes.<sup>92</sup>

<sup>86</sup> Either the defendant can appeal against conviction or the prosecution can appeal against acquittal: *Criminal Law Consolidation Act 1935* (SA) s 352.

<sup>87</sup> *R v Hetherington* (Unreported, Supreme Court of South Australia, Court of Criminal Appeal, Nyland, Mohr and DeBelle JJ, 24 August 1994). However, no reversal is available on the basis of credibility findings unless it was wrong in law for the trial judge to rely on credibility as the basis for the verdict: see, eg, *State Rail Authority of New South Wales v Earthline Constructions Pty Ltd (in liq)* (1999) 160 ALR 588, 620–2 (Kirby J); *Williams v Minister, Aboriginal Land Rights Act 1983* (1999) 25 Fam LR 86 (Supreme Court of New South Wales); *Williams v Minister, Aboriginal Land Rights Act 1983* [2000] Aust Torts Reports ¶81-578, 64 136 (Spigelman CJ, Sheller and Heydon JJA) (New South Wales Court of Appeal); *Branir Pty Ltd v Owston Nominees [No 2] Pty Ltd* (2001) 117 FCR 424, 437–8 (Drummond, Mansfield and Allsop JJ); *Tapp v Thamer* [2002] ACTSC 86 (Unreported, Miles CJ, 29 August 2002).

<sup>88</sup> See, eg, *US v Armstrong*, 253 F 3d 335 (8<sup>th</sup> Cir, 2001); *US v Cruz*, 285 F 3d 692 (8<sup>th</sup> Cir, 2002). These are federal cases, but the test employed is the same in state jurisdictions.

<sup>89</sup> *State v Gladstone*, 474 P 2d 274 (Wash, 1970). In this case, the Court found that the jury should not have convicted the defendant of aiding or abetting a crime on the basis of insufficient evidence of knowledge and intent. In Oregon, appeal is only available with respect to errors of law that substantially affect the rights of the parties: OR REV STAT § 138.220 (2001).

<sup>90</sup> *Fabritz v Traurig*, 583 F 2d 697 (4<sup>th</sup> Cir, 1978). In this case, the Court found insufficient evidence to support a finding that the defendant had knowingly abused her child. The case arose on a habeas corpus petition rather than on appeal.

<sup>91</sup> See, eg, Daniel Kahneman and Amos Tversky, 'Choices, Values, and Frames' in Terry Connolly, Hal Arkes and Kenneth Hammond, *Judgment and Decision Making: An Interdisciplinary Reader* (2<sup>nd</sup> ed, 2000) 147, 150–2. The authors use the following example:

The US is preparing for the outbreak of an unusual disease that without treatment is expected to kill 600 people. The following sets of choices are postulated:

Choice 1:

- If treatment program A is adopted, 200 people will be saved.
- If treatment program B is adopted, there is a one-third probability that 600 will be saved and a two-thirds probability that no-one will be saved.

Choice 2:

- If treatment program C is adopted, 400 people will die.
- If treatment program D is adopted, there is a one-third probability that nobody will die and a two-thirds probability that 600 people will die.

A rational decision maker would identify that A=C and B=D. However, irrationally most people (72 per cent) choose A in Choice 1 and D (78 per cent) in Choice 2.

<sup>92</sup> For example:

Choice A: a one in 1000 chance of losing \$5000.

Choice B: a sure loss of \$10.

The expected payoff from Choice A is -\$5, which clearly outweighs Choice B (-\$10). However, Plous notes that, irrationally, four out of five respondents prefer the sure loss because of a ten-

Modern scholarly approaches to decision-making also focus upon the normative content of decision-making, or at least a combination of normative content and robustness of decision-making processes.<sup>93</sup> Definitions of rationality that focus solely upon decision processing may not necessarily produce good decisions. A decision-maker may think rationally on the basis of irrational assumptions.<sup>94</sup> For example, as a result of delusion, a person may believe that aliens or secret government agents are pursuing them. However, the person concerned may still make rational decisions for coping with this imagined situation. Moreover, departure from the 'logic of rationality' may quite properly reflect an individual's particular circumstances. For example, over-weighting of whether a decision is framed as a loss or a gain may be significant to a risk-averse individual. Consequently, current literature argues that a decision is 'good' if, apart from displaying internal consistency and coherence, it:

- 1 reflects basic principles of survival and adaptation;<sup>95</sup>
- 2 reflects actively open-minded thinking that facilitates choosing the best possibility;<sup>96</sup>
- 3 produces outcomes that are empirically accurate,<sup>97</sup> and do not depart markedly from actual probabilities;<sup>98</sup> and
- 4 survives ex post facto intuitive examination.<sup>99</sup>

A decision is bad if, after it is made, the decision-maker wishes that he or she had not made it.

When it comes to judging the consequences of real human behaviour, the continued popularity of jury trials indicates that empathy, rather than cold, hard rationality, is the desired criterion of decision-making. Yet the studies by behavioural scientists on legal decision-making by judges and juries<sup>100</sup> have

dency to overweight the chances of a large loss: Scott Plous, *The Psychology of Judgment and Decision Making* (1993) 99. See also Daniel Kahneman and Amos Tversky, 'Prospect Theory: An Analysis of Decision under Risk' (1979) 47 *Econometrica* 263.

<sup>93</sup> Reid Hastie, 'Problems for Judgment and Decision Making', (2001) 52 *Annual Review of Psychology* 653, 660.

<sup>94</sup> Jonathan Baron, *Thinking and Deciding* (1988) 29.

<sup>95</sup> Leda Cosmides and John Tooby, 'Are Humans Good Intuitive Statisticians after All? Rethinking Some Conclusions from the Literature on Judgment under Uncertainty' (1996) 58 *Cognition* 1; Gerd Gigerenzer, 'Rationality: Why Social Context Matters' in Paul Baltes and Ursula Staudinger (eds), *Interactive Minds: Life-Span Perspectives on the Social Foundation of Cognition* (1996) 319.

<sup>96</sup> Baron, above n 94, 31.

<sup>97</sup> Kenneth Hammond, *Human Judgment and Social Policy: Irreducible Uncertainty, Inevitable Error, Unavoidable Justice* (1996); Kenneth Hammond, 'Coherence and Correspondence Theories in Judgment and Decision Making' in Hal Arkes and Kenneth Hammond (eds), *Judgment and Decision Making: An Interdisciplinary Reader* (2000) 53, 95.

<sup>98</sup> For example, in a roulette game, the odds of winning on red are 1:1. Yet people are more likely to bet on black following a succession of red wins: see Saks and Kidd, above n 85, 217.

<sup>99</sup> Herbert Simon, 'Alternative Visions of Rationality' in Paul Moser (ed), *Rationality in Action: Contemporary Approaches* (1990) 189, 200-3.

<sup>100</sup> See, eg. W Lance Bennett and Martha Feldman, *Reconstructing Reality in the Courtroom: Justice and Judgment in American Culture* (1981); Saks and Kidd, above n 85; Willem Wagenaar, Peter van Koppen and Hans Crombag, *Anchored Narratives: The Psychology of Criminal Evidence* (1993); Bernard Jackson, "'Anchored Narratives" and the Interface of Law, Psychology and Semiotics' (1996) 1 *Legal and Criminological Psychology* 17; Chris Guthrie,

tended to focus upon departures from rationality models that focus upon the decision-making process rather than the latter, more normative, means of evaluation.<sup>101</sup>

In a landmark study conducted by Guthrie, Rachlinski and Wistrich,<sup>102</sup> several common cognitive illusions were identified in judicial decision-making. Similar cognitive illusions had already been identified in earlier studies of jury decision-making.<sup>103</sup> These illusions included: anchoring,<sup>104</sup> framing,<sup>105</sup> hindsight bias,<sup>106</sup> representativeness heuristic,<sup>107</sup> and egocentric bias.<sup>108</sup>

Jeffrey Rachlinski and Andrew Wistrich, 'Inside the Judicial Mind' (2001) 86 *Cornell Law Review* 777.

<sup>101</sup> This approach has recently been criticised by Gregory Mitchell, 'Taking Behavioralism Too Seriously? The Unwarranted Pessimism of the New Behavioral Analysis of Law' (2002) 43 *William & Mary Law Review* 1907.

<sup>102</sup> Guthrie, Rachlinski and Wistrich, above n 100.

<sup>103</sup> See, eg, Robert MacCoun, 'Experimental Research on Jury Decision-Making' (1989) 244 *Science* 1046; Gretchen Chapman and Brian Bornstein, 'The More You Ask for, the More You Get: Anchoring in Personal Injury Verdicts' (1996) 10 *Applied Cognitive Psychology* 519; Reid Hastie, David Schkade and John Payne, 'Juror Judgments in Civil Cases: Hindsight Effects on Judgments of Liability for Punitive Damages' (1999) 23 *Law and Human Behavior* 597.

<sup>104</sup> Anchored decision-makers adjust insufficiently from anchor values. In the Guthrie, Rachlinski and Wistrich study, above n 100, 790–2, groups of judges were asked to fix damages in a personal injury suit. One group was told that the defendant had made an application to have the suit dismissed because the claim did not meet the jurisdictional minimum of US\$75 000. The application was without merit. Nonetheless, the group of judges who were informed of the defendant's application, on average, fixed damages at a lower amount than the group of judges who were not given any information other than details of the plaintiff's injuries and how they were incurred.

<sup>105</sup> Under framing, decision-makers tend to respond differently depending upon whether the problem is formulated as a choice between making a gain or making a loss. In the Guthrie, Rachlinski and Wistrich study (ibid 796–7) different groups of judges were asked whether a suit should be settled for a certain amount from either the defendant's or the plaintiff's perspective. Judges in both groups (plaintiff or defendant) were presented with economically identical information, but from the plaintiff's perspective the settlement was framed as a gain and from the defendant's perspective the settlement was framed as a loss. Approximately 40 per cent of judges in the plaintiff's group felt the plaintiff should accept the settlement, while only 25 per cent of judges in the defendant's group felt that the defendant should settle the case.

<sup>106</sup> Hindsight bias describes the tendency to assign higher probabilities to an event in retrospect than would be assigned in advance of the event. In the Guthrie, Rachlinski and Wistrich study (ibid 801–3) different groups of judges were given divergent information about an appellate court's decision. One group was told that the appellate court had affirmed the lower court's decision. One group was told that the appellate court had vacated the lower court's decision. One group was told that the appellate court had imposed a different sanction. When the judges were asked whether they would have affirmed the lower court's decision, 81.5 per cent of the group told that the appellate court had affirmed indicated they would have predicted that result. On the other hand, of the group told that the appellate court had vacated the lower court's decision, only 27.8 per cent would have affirmed. Similarly, only 40.4 per cent of those told that the appellate court imposed a different sanction would have affirmed the lower court's decision.

<sup>107</sup> Representativeness heuristics refers to the tendency of people to judge probabilities by the degree to which the evidence being analysed is representative of a category. One important consequence of representativeness heuristics in legal decision-making is that sample behaviour is expected to be highly representative of a parent population. Reliance on representative heuristics leads people to ignore 'base rate' information (the relative frequency with which an event occurs). In the Guthrie, Rachlinski and Wistrich study (ibid 808–10) judges were asked to determine whether a defendant had negligently injured the plaintiff. In the scenario outlined, the plaintiff was injured after being struck by a barrel being loaded from the defendant's hoist into a warehouse. The judges were told that (1) when barrels are negligently secured there is a 90 per cent chance they will break loose; (2) when barrels are properly secured they break loose only one per cent of the time; and (3) workers negligently secured barrels only one in 1000 times. Applying that information, the conditional probability that the defendant is negligent given the

When considering the application of their study to courtroom decision-making, Guthrie, Rachlinski and Wistrich felt that, despite the necessary qualifications that have to be made when transplanting experimental responses to real life situations, their study was accurate in its portrayal of the thought processes used by judges.<sup>109</sup> However, there are a number of reasons to doubt that view. First, in South Australia at least, judges are required to provide written reasons for their decisions. The requirement of written reasoning encourages rational decision-making in both the traditional and more normative senses because it allows depth of review, recourse to decisional tools and other forms of reality testing absent from the quick brain teasing exercises outlined in the behavioral science experiments. Moreover, although the judiciary in Eugene is not required to provide written reasons, when questioned about their decision-making, Eugene judges indicated that they wrote extensive notes and tended to adopt similar checking upon their reasoning that they would employ if their reasoning was published.

Most judges indicated that they felt limited when engaged in the fact-finding process. In South Australia, the requirement to provide written reasons was regarded as a constraint because the basis for all primary fact-finding had to be made transparent by clear reference to the evidence. Further, the basis upon which evidence was found to be persuasive and accepted by the judge also had to be stated. In turn, this reasoning had to be strongly related to the discharge of the burden of proof. Some of the judges in Eugene further indicated that their fact-finding discretion was strongly constrained in favour of the presumption of innocence and that, where a fact-finding discretion could be exercised, it was employed in favour of the defendant.

The requirement of written reasons also ensured against irrelevant or otherwise inadmissible material being taken into account and thus guarded against inappropriate anchoring. Even though Eugene judges were not required to publish written reasons, all judges from South Australia and Eugene stated that, as a result of their legal training, they were able to disregard irrelevant and/or inadmissible material. Judicial legal training included examination of the rationale of the evidential requirement of relevance and of the evidentiary rules of exclusion. For example, through this understanding, judges felt that they were better placed to discount hearsay because the dangers of hearsay evidence, such as distortion and confabulation, were the subject of critical examination in their legal education.<sup>110</sup>

plaintiff's injury is 8.3 per cent. Yet over 40 per cent of judges determined that the likelihood that the defendant was negligent given the plaintiff's injury to be between 76 and 100 per cent. In other words, the group of judges who over-inflated the odds of negligence placed too much weight upon (1) and insufficient weight upon (2) and (3).

<sup>108</sup> Egocentric bias refers to the tendency of people to make judgments about themselves and their abilities that are self-serving. In one study, for example, judges tended to overestimate the degree to which the lawyers appearing before them felt fairly treated: see Theodore Eisenberg, 'Differing Perceptions of Attorney Fees in Bankruptcy Cases' (1994) 72 *Washington University Law Quarterly* 979, 983-7.

<sup>109</sup> Guthrie, Rachlinski and Wistrich, above n 100, 819.

<sup>110</sup> Empirical research indicates that lay jurors, in fact, give little weight to excluded evidence such as hearsay: see Peter Miene, Roger Park and Eugene Borgida, 'Juror Decision Making and the Evaluation of Hearsay Evidence' (1992) 76 *Minnesota Law Review* 683; Richard Rakos and

Second, the behavioural science experiments were presented as neatly packaged problems where the intermediate facts underlying the ultimate findings that the judges were required to make were presented definitively, rather than as items of evidence subject to the rigour of adversarial examination and rebuttal by way of contrary evidence. The judges subject to these experiments lacked the benefit of hearing divergent views, of testing the evidence, and of access to other evidence and base rate information which they would normally enjoy. In this respect, the experiments were designed to elicit error.<sup>111</sup> Given the many differences between the manner in which facts are presented at trial, it would be wrong to assume that performance on one type of problem will be the same for another type of problem. Actual reasoning processes are content-bound or schema-bound.<sup>112</sup>

Third, the level of decision-making error recorded in the behavioural science experiments was inflated by the representation of the problems that the judges were given to consider in a single event versus frequency format.<sup>113</sup> They lacked the feedback and learning opportunities about the subject and the decision-making process of which a judge would ordinarily be apprised through the experience of sitting on many similar cases, recourse to precedent and use of model decision-making formats.

In the judges' views, juries were less constrained in their fact-finding function. As a result, the judges felt that evidential rules excluding prejudicial material were more important in jury trials than in bench trials. From the judicial perspective, it was the absence of accountability through the publication of reasons, rather than the frailty of lay decision-making, that justified common law evidential exclusionary rules in jury trials.<sup>114</sup>

Rationality in the non-normative sense cannot provide an effective benchmark to evaluate judicial and lay decision-making for several other reasons. First, it cannot accurately depict commonsense knowledge and reasoning<sup>115</sup> where the probabilities governing the relationship between facts and inference remain inexact and consequently unarticulated. Second, models of rationality cannot easily incorporate default reasoning; that is, the use of hypotheses or assump-

Stephen Landsman, 'Researching the Hearsay Rule: Emerging Findings, General Issues, and Future Directions' (1992) 76 *Minnesota Law Review* 655. This type of research has led Damaska to conclude that professional judges may also easily misvalue excluded evidence such as hearsay: Mirjan Damaska, *Evidence Law Adrift* (1997) 30–2. Damaska argues that the absence of accountability through the publication of reasons rather than the frailty of lay decision-making justifies common law evidential exclusionary rules: at 41–6.

<sup>111</sup> Lee Roy Beach, Jay Christensen-Szalanski and Valerie Barnes, 'Assessing Human Judgment: Has It Been Done, Can It be Done, Should It Be Done?' in George Wright and Peter Ayton (eds), *Judgmental Forecasting* (1987) 49.

<sup>112</sup> Daniel Kahneman and Amos Tversky, 'On the Study of Statistical Intuitions' (1982) 11 *Cognition* 123, 130–1.

<sup>113</sup> See Cosmides and Tooby, above n 95, 17–21.

<sup>114</sup> This is consistent with the views of Damaska when comparing bifurcated decision-making in common law adversarial systems with unitary trial systems in civil law countries: Damaska, above n 110, 41–6.

<sup>115</sup> Marilyn MacCrimmon, 'What Is "Common" about Common Sense?: Cautionary Tales for Travelers Crossing Disciplinary Boundaries' (2001) 22 *Cardozo Law Review* 1433, noting that what constitutes commonsense varies across subgroups of the population.

tions people are prepared to make about the world unless shown to be wrong.<sup>116</sup> Heuristics are a necessary adjunct of complex decision-making. They enable the decision-maker to assimilate thousands of life episodes to form a judgment in each new individual case. Without the capacity to assimilate and incorporate default reasoning, complex decision-making would become overwhelmingly prolix and difficult. Third, there is no ontology to account for linguistic uncertainty. Uncertainty may arise to the extent that the meaning of a term of legal significance, such as ‘intent’ or ‘fault’, is ambiguous, or may arise from ambiguity of reference.<sup>117</sup> Rationality dependent upon the correct application of a legal rule becomes unattainable where the legal rule itself is open-ended and variable. Further, models of rationality cannot warrant a fact-finder’s conclusion about witness credibility, where judgment is dependent on a complex web of optics and sensory psychology, and knowledge of personal and human behaviour. Models of rationality tend to assume that inferences are easily verifiable and do not easily apply where the inferential reasoning is based on the interplay of numerous observations and knowledge absorbed through experience and study.

When asked about the method in which they went about fact-finding in bench trials, the judiciary from South Australia and Eugene answered several questions designed to elicit whether they used Bayesian techniques.<sup>118</sup> They were asked questions designed to show whether they used Bayesian techniques in general, and whether they used Bayesian techniques in relation to specific types of fact-finding. In particular, they were asked to compare and contrast their fact-finding techniques with respect to credibility findings and fact-finding techniques when applied to matters of forensic expertise.

Bayesian analysis provides mechanisms for making probabilistic inferences of the kind required by curial fact-finding.<sup>119</sup> Using Bayesian analysis is likely to reduce some of the cognitive illusions outlined previously because it requires the articulation of base rate information and prevents the masking of bias and representativeness heuristic. Moreover, because it requires information to be presented mathematically, it also reduces the likelihood that framing will unduly influence decision-making.

All judges questioned (whether from South Australia or Eugene) indicated that they did not use Bayesian analysis as a general method of reviewing evidence. They indicated that they tended to analyse evidence against a narrative view of the case as a whole and did not calculate guilt on the basis of a combination of the prior odds of guilt and the individual odds of each new piece of evidential information. This approach to decision-making, commonly known as the ‘story

<sup>116</sup> Ibid 1457–8.

<sup>117</sup> Vern Walker, ‘Theories of Uncertainty: Explaining the Possible Sources of Error in Inferences’ (2001) 22 *Cardozo Law Review* 1523, 1532–4.

<sup>118</sup> For a useful discussion on the application of Bayesian belief networks in the legal domain, see Ward Edwards, ‘Influence Diagrams, Bayesian Imperialism and the *Collins* Case: An Appeal to Reason’ (1991) 13 *Cardozo Law Review* 1025.

<sup>119</sup> For a description of the application of Bayes theorem to curial fact-finding, see Andrew Ligertwood, *Australian Evidence* (3<sup>rd</sup> ed, 1998) 21–32. See also C G G Aitken, *Statistics and the Evaluation of Evidence for Forensic Scientists* (1995).

model'<sup>120</sup> of decision-making, organises, interprets and evaluates evidence against a narrative construction of the events supplied by the parties and from the knowledge and experience of the decision-maker. The story model of decision-making has been consistently observed among jurors and judges (and confirmed by the participants in this survey). According to research, judges and jurors often construct a number of stories about an event and will accept one story as the best when it best accounts for the evidence presented at trial and is the most coherent in the sense of being internally consistent, plausible and complete.<sup>121</sup> Confidence in a story is increased where the story appears to be the only explanation of the evidence.

The failure to embrace an 'atomistic' model of decision-making,<sup>122</sup> whereby the fact-finder assigns probative weight to distinct pieces of evidence and arrives at a final determination by aggregating or disaggregating those probabilities, is a significant obstacle to the adoption of Bayes theorem. It seems that both judicial and lay decision-makers find it difficult to divorce the evaluation of individual items of evidence from overall judgment.

The survey results rejecting Bayes theorem are consistent with appellate case law such as *R v Adams*<sup>123</sup> and *R v GK*.<sup>124</sup> In South Australia, use of Bayes theorem in jury trials has been specifically disavowed in relation to DNA evidence.<sup>125</sup> In an influential Australian article the position has been put that

[legal] decision-making generally involves a global assessment of a whole complex array of matters which cannot be given individual numerical expression. Such a decision depends very much more on commonsense, experience of the world, and beliefs as to how people generally behave ... than on mathematical computations; and concentration on mathematical probabilities could prejudice this commonsense process.<sup>126</sup>

When asked whether they were likely to apply probabilistic inference more readily to forensic evidence, a small majority of judges from both jurisdictions indicated that they did not apply probabilistic inference to forensic evidence any more than they might apply probabilistic inference to evaluate the credibility of a witness. A significant minority indicated that they tended to examine the

<sup>120</sup> Richard Friedman, 'Answering the Bayesioskeptical Challenge' (1997) *International Journal of Evidence and Proof* 276, 286; Ronald Allen, 'Factual Ambiguity and a Theory of Evidence' (1994) 88 *Northwestern University Law Review* 604; Nancy Pennington and Reid Hastie, 'A Cognitive Theory of Juror Decision Making: The Story Model' (1991) 13 *Cardozo Law Review* 519; Bennett and Feldman, above n 100, 4–10, 41–64.

<sup>121</sup> Pennington and Hastie, above n 120, 527–8.

<sup>122</sup> William Twining, *Theories of Evidence: Bentham and Wigmore* (1985) 3, 183–5.

<sup>123</sup> [1996] 2 Cr App R 467, 482 (Rose LJ) ('*Adams*'). The appellate court disapproved of the trial judge's explanations of Bayes theorem to a jury. The explanation was given to put DNA evidence in context. However, the appellate court found that the 'attempt to determine guilt or innocence on the basis of a mathematical formula, applied to each separate piece of evidence, is simply inappropriate to the jury's task'. See also *R v Doherty* [1997] 1 Cr App R 369, 375.

<sup>124</sup> (2001) 53 NSWLR 317, 323–4 (Mason P), endorsing the approach in *Adams* and stating that '[t]he process of assessing the weight of different items of evidence and reasoning to a conclusion on the civil or criminal standard cannot be reduced to mathematical formulae.'

<sup>125</sup> *R v Karger* (2001) 83 SASR 1, 165–6 (Mullighan J).

<sup>126</sup> Justice David Hodgson, 'The Scales of Justice: Probability and Proof in Legal Fact-Finding' (1995) 69 *Australian Law Journal* 731, 736.

probabilities underlying the testimony of expert witnesses more sceptically than other forms of evidence. However, none of the judges questioned indicated that they applied Bayes theorem to test those probabilities. That view is understandable given the difficulty of determining the posterior odds of guilt or innocence in light of the other evidence presented.

Traditional judicial rejection of base rate information and focus upon individualistic judgment are obstacles to the adoption of Bayes theorem in legal decision-making. Although base rate information is accepted for certain types of evidence, the relevance of which is dependent upon the relative frequency of samples in the population (such as DNA or fingerprint analysis), the courts have traditionally rejected base rate information where it reflects more generally on witness credibility. This stems partly from the view that the fact-finder is in the best position to determine credibility according to demeanour and consistency of evidence with other proven facts, and partly from the view that generalisations about human character are unreliable.<sup>127</sup> Except for certain evidence, such as fingerprint or DNA analysis, base rate information is regarded as being of marginal probative value and, given the oral nature of the trial process, likely to add considerable cost to the proceedings.<sup>128</sup> Consequently, evidence about the relative frequency of mistaken identification has been rejected,<sup>129</sup> as has evidence about the likelihood of a victim of child sexual abuse maintaining a relationship with the abuser,<sup>130</sup> and evidence about whether persons other than the fact-finder would also have been able to identify similarities between a photograph and the accused.<sup>131</sup> Conversely, individualistic evidence that reflects on credibility such as a witness's prior convictions is admissible,<sup>132</sup> notwithstanding the lack of any empirical evidence demonstrating a link between criminal conviction and veracity.

The inability to apply base rate information to evidence means that the probabilities assigned to evidential inputs using Bayes theorem cannot be determined accurately. To atomise evaluations about specific items of evidence reliably, base rate information confirming the inherent likelihood of the proposition the evidence purports to confirm is required. Otherwise, the probabilities assigned to items of evidence lacking comparison with base rate information are subjective and non-verifiable. Even if the courts permitted access to such information, it

<sup>127</sup> See, eg, *State Government Insurance Commission (South Australia) v Laube* (1984) 37 SASR 31, 33 (King CJ, Millhouse and Prior JJ): 'the statistical fact that a particular proposition is true of the majority of persons cannot of itself amount to legal proof on the balance of probabilities that the proposition is true of any given individual.'

<sup>128</sup> See Adrian Zuckerman, 'Evidence' [1982] *All England Law Reports Annual Review* 126, 128–9. See also Damaska, who argues that the concentrated nature of the oral criminal trial raised greater concerns about limiting the fact-finder's database than episodic proceedings: Damaska, above n 110, 61–4.

<sup>129</sup> *R v Smith* [1987] VR 907; *R v Fong* [1981] Qd R 90.

<sup>130</sup> *C v The Queen* (1993) 60 SASR 467; *R v F* (1995) 83 A Crim R 502, 508–9 (Gleeson CJ, Grove and Abadee JJ).

<sup>131</sup> *Smith v The Queen* [2001] HCA 50 (Unreported, Gleeson CJ, Gaudron, Gummow, Kirby and Hayne JJ, 16 August 2001).

<sup>132</sup> *Aldridge v The Queen* (1990) 20 NSWLR 737.

may not be available,<sup>133</sup> it might not be possible to transpose base rate information from one population to another,<sup>134</sup> or alternatively it might be conceptually difficult to properly define the appropriate reference population.<sup>135</sup> Some base rates are more appropriate than others in their analogous fit to the facts of particular cases. Clearly, the closer the analogous fit, the more valuable the base rate information will be.

However, even assuming that reliable base rate information is available and admissible, without the qualitative insights that emerge from Bayesian analysis there is a significant danger that the fact-finder will misvalue it. Either base rate information will be undervalued because of the preference of fact-finders to focus upon subjective, non-quantifiable human factors,<sup>136</sup> or it will be overvalued where the probabilities assigned are apparently overwhelming, as is the case with much modern-day DNA analysis.<sup>137</sup> From a policy perspective, Bayesian analysis is inconsistent with the story model of decision-making because it produces 'frequentist decisions' rather than 'believability decisions' as to how a series of events unfolded.<sup>138</sup> The general consensus is that legal fact-finders cannot transform their beliefs about uncertain events into relative frequencies and cannot perform the requisite probability calculations. Bayesian analysis thus appears to be more useful as a tool of review than as a tool of first level fact-finding.

## VII CONCLUSION

Insofar as fact-finding is concerned, there is little to distinguish the approaches of judges and lay fact-finders. Judges are not automatons. While it is difficult to transpose experimental data to real life decision-making, from time to time judges will, as much as jurors, be imperfect decision-makers. Judges in both Eugene and South Australia indicated that they tended to adhere to the 'story model' of evidence evaluation and did not apply Bayesian techniques designed to reduce reliance on heuristics and anchoring. Indeed, many of the judges interviewed expressed a high level of confidence in jury decision-making. Given

<sup>133</sup> Kenneth Foster and Peter Huber, *Judging Science: Scientific Knowledge and the Federal Courts* (1999) 127–8 noting that, although DNA fingerprinting is an exception, even many scientific tests that were developed in an environment lacking normal scientific and medical rigour lack basic information about accuracy and reliability when applied to mixed populations.

<sup>134</sup> For example, it may not be possible to transpose information about rates of HIV infection among the adult population to HIV rates among children.

<sup>135</sup> For example, while it might be possible to obtain information about rates of HIV infection among the Australian population as a whole, it may not be possible to obtain information about HIV rates among white women living in certain parts of New South Wales.

<sup>136</sup> Daniel Kahneman and Amos Tversky, 'On the Psychology of Prediction' (1973) 80 *Psychological Review* 237. Kahneman and Tversky devised a test where the subjects were told that 70 per cent of the members of a group were lawyers and 30 per cent engineers. Each member of the group was characterised as 'a good communicator' or 'a person who enjoys working with numbers'. The subjects then had to label the members of the group as a lawyer or an engineer. Despite the background information about the total number of lawyers and engineers in the group, the test subjects relied more heavily on the characterisations of the group members as 'good communicators' or 'good with numbers' when making their choices.

<sup>137</sup> Tribe, above n 85, 1361.

<sup>138</sup> Paul Bergman and Al Moore, 'Mistrial by Likelihood Ratio: Bayesian Analysis Meets the F-Word' (1991) 13 *Cardozo Law Review* 589.

that judges and jurors tend to evaluate evidence in similar ways, this is not surprising.

This does not necessarily mean, however, that judges and lay fact-finders are likely to be affected by cognitive illusion on a routine basis. The group dynamic of jury decision-making is an important systemic feature that tends to reduce cognitive illusion.<sup>139</sup> Group performance can enhance decision-making by moderating the effect of biasing influences.<sup>140</sup> Consequently, the combination of group deliberation and the close supervision of the range of evidence available to the jury for its decision-making act as important prophylactics against irrational decision-making.<sup>141</sup> The availability of appeal provides an ex post facto means of ensuring reasonable adherence to the presumption of innocence and the necessity of proof beyond reasonable doubt.

Trial judges use techniques that avoid irrational decision-making. These include recourse to decisional tools such as precedent, reliance upon rules of proof that direct the judge to be cautious of unreliable evidence, the use of written reasons which direct the judge to articulate and to examine critically the inferences underlying their conclusions of fact and, lastly, a sense of their own role in the criminal justice system. Judicial recognition of the scope of their mandate to deliver judgment according to law, while recognising that law is not a collection of immutable rules, is an acknowledged restraint upon both the fact-finding function and upon the manner in which legal rules are interpreted and applied to established facts. Judges' decisions are also subject to appeal and, where written reasons are required, appellate review is likely to be more thorough than in lay decision-making, where no such transparency applies.

Rather, this study confirms Kalven and Zeisel's earlier findings<sup>142</sup> — that the primary determinants of the choice to proceed by judge or jury are cultural.

<sup>139</sup> Plous, above n 92, 211–14.

<sup>140</sup> Kamala London and Narina Nunez, 'The Effect of Jury Deliberations on Jurors' Propensity to Disregard Inadmissible Evidence' (2000) 85 *Journal of Applied Psychology* 932, 937. However, see also Norbert Kerr, Robert MacCoun and Geoffrey Kramer, 'Bias in Judgment: Comparing Individuals and Groups' (1996) 103 *Psychological Review* 687, 713, arguing that the comparative level of bias between groups and individuals varies according to group size, the source and magnitude of the bias, and the type of bias.

<sup>141</sup> Guthrie, Rachlinski and Wistrich, above n 100, 827.

<sup>142</sup> Kalven and Zeisel, above n 1, 24–30.

## VIII APPENDICES

A *Judicial Survey*

Administered to members of the Circuit Court in Eugene, Oregon, and to members of the District Court and Supreme Court of South Australia who volunteered to participate.

Individual survey participants will not be identified. Consequently the identity of the author of any answer will remain strictly confidential. The answers themselves, however, may be published.

- 1 In jury trials, judges are expected to appear as neutral as possible. It is difficult to intervene too readily in an attorney's/counsel's presentation of the case because interventions may influence the jury.
  - (a) If the attorney/counsel was presenting the case poorly in a non-jury trial, would you feel more comfortable with questioning a witness directly than you might in a jury trial?
  - (b) Would you say that your questioning of witnesses was more or less frequent in non-jury trials than in jury trials?
  - (c) If the attorney/counsel were raising irrelevant issues in a non-jury trial, would you feel more comfortable about prohibiting pursuit of a line of questioning than you would in a jury trial?
- 2 Does your role as fact-finder justify pursuing greater clarification of the issues than might have been presented by the attorneys/counsel?
- 3 Does your role as fact-finder justify eliciting further evidence from witnesses than might have been presented by the attorneys/counsel?
- 4 Does your role as fact-finder justify questioning of witnesses in a cross-examining manner?
- 5 When reviewing the evidence presented at trial do you:
  - (a) assess each piece of evidence individually and calculate its effect upon the overall likelihood of the prosecution and defence cases, then adjust the probability ratios as each item of evidence is adduced?; or
  - (b) use individual items of evidence to construct an explanation of the events which you evaluate in terms of likelihood and coherence?; or
  - (c) a combination of (a) and (b)?; or
  - (d) none of the above?
- 6 If your answer to question 5 was (d), can you explain how you go about reviewing the evidence presented at trial?
- 7 Do you assess credibility issues according to the plausibility and coherence of conflicting stories of the evidence?
- 8 Do you apply the same approach to forensic evidence or identification evidence?
- 9 If your answer to question 8 was no, can you explain how you go about evaluating the validity of forensic evidence. For example, how would you evaluate evidence of matching fibres of the defendant's hair found on a stocking mask used in a robbery?

- 10 How do your skills and experience as a trial judge facilitate the assessment of credibility issues?
- 11 How do your skills and experience as a trial judge facilitate the assessment of forensic evidence?
- 12 Do trial judges have a more informed insight into the background of cases than jurors?
- 13 Sometimes trial judges become privy to inadmissible evidence. How do your skills and experience as a trial judge facilitate determination of liability strictly in accordance with the evidence in this situation?
- 14 Do you feel you have less or more discretion than a jury in your fact-finding role?
- 15 Do you feel you have less or more discretion than a jury when you are required to apply legal principles to the facts as found?
- 16 Do your skills, knowledge and experience as a trial judge facilitate the application of the law to the facts?
- 17 How does the obligation to provide a logically coherent and sustainable judgment affect your fact-finding?
- 18 To protect individual jurors from undue influence, jury deliberations are not subject to public scrutiny. Do you think that this affects the reliability of their fact-finding?
- 19 In the past six months, have there been any jury verdicts with which you have disagreed?

B *Survey Results*

<b>Question</b>	<b>Eugene Judges</b>	<b>South Australian Judges</b>
<p>1(a) If the attorney/counsel was presenting the case poorly in a non-jury trial, would you feel more comfortable with questioning a witness directly than you might in a jury trial?</p>	<p>All judges interviewed indicated that they would not question a witness directly on the basis of poor performance by counsel. The judges were of the view that asking questions might be perceived as demonstrating bias.</p> <p>Three judges indicated that their only basis for asking witnesses questions was to clarify ambiguity. This was rarely done.</p> <p>One judge indicated that if an attorney was performing poorly he or she would be inclined to speak with the attorney directly.</p>	<p>Three judges indicated that they might question a witness directly if they felt that an obvious issue was not being pursued by counsel or that a point was not being made clearly.</p> <p>Three judges indicated that they would not ask questions except to clarify ambiguity.</p> <p>One judge indicated that if counsel was performing poorly he or she would be inclined to speak with counsel directly.</p>
<p>1(b) Would you say that your questioning of witnesses was more or less frequent in non-jury trials than in jury trials?</p>	<p>All judges indicated that it would be improper to address questions to witnesses in criminal cases, with or without a jury, as this would impinge upon the defendant's right to have the prosecution prove its case beyond reasonable doubt.</p>	<p>Three judges indicated that they felt more comfortable directing questions to witnesses in bench trials.</p> <p>Three judges indicated that they would not ask questions of witnesses in bench trials, as this would be contrary to the precepts of the adversarial system.</p>

<b>Question</b>	<b>Eugene Judges</b>	<b>South Australian Judges</b>
<p>1(c) If the attorney/counsel was raising irrelevant issues in a non-jury trial, would you feel more comfortable about prohibiting the pursuit of a line of questioning than you would in a jury trial?</p>	<p>All judges indicated that they would feel uncomfortable prohibiting a line of questioning except on the basis of ordinary evidentiary principles that would apply in either a bench trial or a jury trial. One judge indicated that he or she would be more inclined to prohibit irrelevant questioning in a bench trial.</p>	<p>Two judges indicated that they would limit relevant questioning and would take a more managerial approach to the case in a non-jury trial. Four judges indicated that they would only limit questioning that infringed the rules of evidence.</p>
<p>2. Does your role as fact-finder justify pursuing greater clarification of the issues than might have been presented by the attorneys/counsel?</p>	<p>All judges indicated that they would not pursue greater clarification of the issues, as this would undermine the defendant's right to have the prosecution prove its case beyond reasonable doubt.</p>	<p>Three judges indicated that they would be more inclined to seek greater clarification of issues. Three judges indicated that they would not seek clarification of the issues as this would be contrary to the judge's neutral position and might indicate bias.</p>
<p>3. Does your role as fact-finder justify eliciting further evidence from witnesses than might have been presented by the attorneys/counsel?</p>	<p>All judges indicated that they would not elicit further evidence, as this was contrary to the precepts of the adversarial system. Moreover, three judges expressed the view that they would not allow jurors to ask questions seeking further information.</p>	<p>All judges indicated that they would not elicit further evidence, as this was contrary to the precepts of the adversarial system.</p>

Question	Eugene Judges	South Australian Judges
4. Does your role as fact-finder justify questioning of witnesses in a cross-examining manner?	All judges indicated that they would never cross-examine a witness.	All judges indicated that they would never cross-examine a witness.
5. When reviewing the evidence presented at trial do you: (a) assess each piece of evidence individually and calculate its effect upon the overall likelihood of the prosecution and defence cases, then adjust the probability ratios as each item of evidence is adduced?; or (b) use individual items of evidence to construct an explanation of the events which you evaluate in terms of likelihood and coherence?; or (c) a combination of (a) and (b)?; or (d) none of the above?	<p>Three judges indicated that they reviewed evidence using approach (b).</p> <p>Two judges indicated that they reviewed evidence using a combination of (a) and (b), although they tended to favour (b) in determining whether the burden of proof had been discharged overall.</p> <p>All judges rejected the use of Bayesian techniques. Even those who indicated that they might assess each piece of evidence individually and calculate its effect upon the overall likelihood of the parties' cases indicated that they did not use probability reasoning when doing so.</p>	<p>Five judges indicated that they reviewed evidence using approach (b).</p> <p>One judge indicated that he or she reviewed evidence using a combination of (a) and (b).</p>
6. If your answer to question 5 was (d), can you explain how you go about reviewing the evidence presented at trial?	Not applicable.	Not applicable.

<b>Question</b>	<b>Eugene Judges</b>	<b>South Australian Judges</b>
<p>7. Do you assess credibility issues according to the plausibility and coherence of conflicting stories on the evidence?</p>	<p>All judges agreed that they assessed credibility according to the plausibility and coherence of conflicting stories on the evidence.</p>	<p>All judges agreed that they assessed credibility according to the plausibility and coherence of conflicting stories on the evidence.</p>
<p>8. Do you apply the same approach to forensic evidence or identification evidence?</p>	<p>All judges indicated that they tended to examine the assumptions underlying scientific evidence more critically than ordinary witness testimony.</p>	<p>Five judges indicated that they used the same means of evaluating scientific evidence as they might to examine credibility evidence — that is, they assessed it according to its plausibility and coherence of conflicting stories on the evidence. However, two judges mentioned that they examined the assumptions underlying scientific testimony more critically than ordinary witness testimony.</p> <p>One judge indicated that he or she tended to assess scientific testimony atomistically — that is, separately from the other evidence.</p>
<p>9. If your answer to question 8 was no, can you explain how you go about evaluating the validity of forensic evidence. For example, how would you evaluate evidence of matching fibres of the defendant's hair found on a stocking mask used in a robbery?</p>	<p>The judges indicated that they would examine the probabilities underlying the likelihood of a match more critically.</p>	<p>The judges indicated that they would examine the probabilities underlying the likelihood of a match more critically.</p>

<b>Question</b>	<b>Eugene Judges</b>	<b>South Australian Judges</b>
10. How do your skills and experience as a trial judge facilitate the assessment of credibility issues?	<p>One judge felt that he or she might be more analytical than a layperson because he or she tended to examine individual items of evidence more closely.</p> <p>Four judges indicated that they were no better placed at assessing credibility than lay fact-finders.</p>	<p>All judges indicated that they were no better placed at assessing credibility than lay fact-finders.</p>
11. How do your skills and experience as a trial judge facilitate the assessment of forensic evidence?	<p>Three judges indicated that their experience and training made them more cynical about accepting scientific testimony than a lay fact-finder.</p> <p>Two judges expressed the view that they were no better placed to evaluate scientific testimony.</p>	<p>Three judges indicated that their experience and training made them more cynical about accepting scientific testimony than a lay fact-finder.</p> <p>Three judges expressed the view that they were no better placed to evaluate scientific testimony.</p>
12. Do trial judges have a more informed insight into the background of cases than jurors?	<p>All judges felt that they were better informed about the legal process and the burden of proof.</p>	<p>All judges felt that they were better informed about the legal process and the burden of proof.</p>

<b>Question</b>	<b>Eugene Judges</b>	<b>South Australian Judges</b>
<p>13. Sometimes trial judges become privy to inadmissible evidence. How do your skills and experience as a trial judge facilitate determination of liability strictly in accordance with the evidence in this situation?</p>	<p>All judges felt that their experience and training enabled them to better appreciate the rationale underlying the rules of evidence, which meant that they were better placed to ignore inadmissible evidence.</p>	<p>All judges felt that their experience and training enabled them to better appreciate the rationale underlying the rules of evidence, which meant that they were better placed to ignore inadmissible evidence.</p>
<p>14. Do you feel you have less or more discretion than a jury in your fact-finding role?</p>	<p>Three judges indicated that the requirement to account for their findings generally meant their discretion was more constrained. The other judges expressed no view.</p>	<p>Four judges felt that the requirement of written reasons constrained their fact-finding discretion, especially in terms of the discharge of the burden of proof. One judge felt that the fact-finding discretion was not more constrained than for lay fact-finders. One judge expressed no view.</p>
<p>15. Do you feel you have less or more discretion than a jury when you are required to apply legal principles to the facts as found?</p>	<p>Three judges were of the view that they had less discretion in fact-finding than juries because they were bound to apply the law and to account for their findings. One judge felt that the discretion was the same. One judge felt that he or she had more discretion to reject dubious evidence and was inclined to exercise it in favour of the defendant.</p>	<p>Four judges felt that the requirement to apply legal principle was not a significant constraint as the law was sufficiently open-ended to achieve an outcome consistent with justice. Two judges indicated that they were more constrained in their application of legal principle than lay fact-finders because they were honour-bound to apply the law and to account for their findings.</p>

<b>Question</b>	<b>Eugene Judges</b>	<b>South Australian Judges</b>
16. Do your skills, knowledge and experience as a trial judge facilitate the application of the law to the facts?	All judges indicated that their skills and training enabled them to articulate their reasoning in a logical and coherent fashion.	All judges indicated that their skills and training enabled them to articulate their reasoning in a logical and coherent fashion.
17. How does the obligation to provide a logically coherent and sustainable judgment affect your fact-finding?	<p>The publication of written reasons is not required in Oregon in bench trials. However, all judges wrote extensive written notes which they used to review the evidence and their reasoning.</p> <p>Two judges expressed the view that this made their fact-finding more organised.</p> <p>One judge expressed the view that this meant that the burden of proof was more emphasised.</p>	The requirement to publish written reasons was an important check upon judicial fact-finding because it required the judges to articulate their reasoning in a logical and compelling manner. It provided a basis for review at appellate level, and three judges indicated that the prospect of appellate review was a significant restraint.
18. To protect individual jurors from undue influence, jury deliberations are not subject to public scrutiny. Do you think that this affects the reliability of their fact-finding?	<p>Because there is no requirement to publish written reasons, four judges were of the view that judges and juries were equally accountable.</p> <p>One judge felt that jury secrecy meant that juries were less accountable.</p>	<p>All judges indicated that jury accountability was impractical given that the jury's decision was essentially a consensus among 12 disparate people.</p> <p>Two judges felt that the dynamic of group decision-making offset the lack of accountability.</p>

<b>Question</b>	<b>Eugene Judges</b>	<b>South Australian Judges</b>
<p>19. In the past six months, have there been any jury verdicts with which you have disagreed?</p>	<p>None of the judges had disagreed with a jury verdict in the past six months. Two judges indicated that they had twice disagreed with a jury verdict in their whole judicial career.</p>	<p>None of the judges had disagreed with a jury verdict in the past six months. One judge indicated that he or she had twice disagreed with a jury verdict in his or her whole judicial career.</p>