21st Century Challenges in Evidence Law

David Hamer*

This special edition arose out of a conference held at Sydney Law School in September 2010.[1] The title of the conference, '21st Century Challenges in Evidence Law', was suggested by Ian Dennis. It appeared an ideal choice in that, while capable of encompassing virtually any evidence-law related topic, it also focused the contributor's mind on the contextual and contemporary relevance of their inquiry.

Of course, in a broad sense, the challenges addressed by evidence law are timeless. Evidence law guides the tribunal of fact in determining the facts underlying a dispute, thereby enabling its resolution. A major concern is the accuracy of that factual account; if the facts are inaccurate, the law is not being properly enforced. But factual accuracy is not pursued at any cost. Evidence law aims for efficient fact-finding, and also shows concern for the potential human costs, both of the process and the verdict. In criminal evidence law, in particular, many principles operate asymmetrically, in recognition of the vulnerability and stake of the accused. And while balancing all these concerns, evidence law has regard to broader institutional values. The adversarial and anti-bureaucratic ethic operating in the common law system results in the parties being given considerable control over the issues, the evidence and the process. The continuing use of juries in serious criminal trials and notions of open justice reflect higher political values. And, to some degree, evidence law is inflected by an appreciation that public hearings must retain general acceptance as a final means of resolving disputes; the self-help alternatives could do considerable damage to the social fabric.

While, at an abstract level, the challenges faced by evidence law are unchanging, their particular manifestations are socially and historically contingent. This special edition reveals a few dominant

* Associate Professor, Sydney Law School.

1 With one exception, all the authors appearing in this edition attended the conference. Unfortunately Andrew Ligertwood, recently retired and now an Emeritus Fellow at Adelaide Law School, was unable to attend. We were, however, very happy to receive a submission from him, having regard to his long and substantial contribution to Australian evidence scholarship and his assistance in the initial planning of the conference.

trends, highlights several contemporary issues, and showcases some innovative research methodologies in evidence scholarship. One of the major themes in current evidence law and evidence scholarship is the growing impact of human rights upon evidence law. The common law tradition incorporates many rights, such as the presumption of innocence and the notion of a fair trial, however, as Ian Dennis's article[2] demonstrates, the *Human Rights Act 1998* (UK), giving domestic force to the European Convention on Human Rights and Fundamental Freedoms, has had a significant impact on criminal evidence law. Dennis's discussion highlights a number of areas where the European Convention has posed challenges for English evidence legislation, such as reverse burdens of proof and the reception of hearsay evidence. However, Dennis focuses on two more general and fundamental issues. First, he assesses the developing jurisprudence of English courts as they seek to accommodate the competing interests and goals generated by rights. To some extent the court is engaged in a balancing act, weighing the claims of the criminal defendant against the interests of other stakeholders, and instrumental epistemic objectives against non-epistemic moral concerns. Dennis considers the extent to which this exercise is governed by a clear set of principles rather than just being an unconstrained exercise of discretion. Second, Dennis explores the relationship between the English courts and the European Court of Human Rights. The two have different legal cultures and styles of reasoning and judgment, and it remains unclear whether their relationship is dialogical, hierarchical or some mix of the two. As Dennis notes, both the English jurisprudence and the relationship between the English and Strasbourg courts are continuing to evolve.

In the present age of growing technology and scepticism, a second major theme in contemporary evidence law is the reception and use of expert evidence at trial. The contribution of Gary Edmond and Andrew Roberts interlaces this second theme with the first — human rights, and those of the criminal defendant in particular.[3] They suggest that, where expert evidence is concerned, the rhetoric of the presumption of innocence and fair trial is not matched by the laws and practices of the criminal courts. As the US National Academy of Science (NAS) report of 2009 and other studies have revealed, much forensic evidence lacks a sound empirical and methodological basis. However, courts readily admit such evidence, with little regard for its reliability. Given the inequality of resources between prosecution and defence, there is little reason to believe that weaknesses with the evidence will be revealed through cross-examination or rebuttal expert evidence. The jury is likely to defer to the prosecution expert; a risk that judicial directions are unlikely to abate. Whatever merits the 'free

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2 'The Human Rights Act and the Law of Criminal Evidence: Ten Years On'.

3 'Procedural Fairness, the Criminal Trial and Forensic Science and Medicine'.

proof' approach may otherwise possess, Edmond and Roberts argue that the law's hands-off treatment of expert evidence constitutes a clear infringement of the accused's right to procedural accuracy. As well as recommending that courts take reliability more seriously at the admission stage, Edmond and Roberts advocate the establishment of a multidisciplinary advisory panel to assess the epistemic merits of forensic scientific claims. Both reforms should reduce the risk of wrongful conviction in individual cases, as well as providing an incentive for greater methodological rigour in forensic science, leading to a general improvement in the accuracy of criminal justice over the longer term.

The article by Gary Edmond, Kristy Martire and Mehera San Roque[4] provides an application of several of the ideas of Edmond and Roberts in the context of identification through cross-lingual voice comparisons. This article considers the use that may be made of prosecution evidence of a sound recording of the perpetrator. Juries are often invited to compare the sound of the perpetrator's voice with the sound of the defendant's voice, with or without the assistance of a prosecution 'expert', to determine whether they are one and the same. Adding to the difficulty of the task is the fact that the comparison is cross-lingual. The perpetrator is speaking one language and the defendant another. Drawing upon empirical research the authors argue that any conclusion from this kind of comparison will be extremely unreliable. Jurors should not be invited to make such comparisons, nor should experts. This is another area where it is wholly inadequate for the trial judge simply to admit the evidence and then warn jurors of dangers inherent in this exercise. This would not avert the risk of wrongful conviction.

Complementing these articles on the dangers of expert evidence is Miiko Kumar's article[5] which provides a forensic dissection of the law governing the admissibility of expert evidence. As Edmond and colleagues demonstrate, reliability is not a precondition to the admissibility of expert evidence, in Australian law at least. And yet, as Kumar shows, there are real constraints on the admissibility of expert evidence. The extent of these constraints under s 79 of the Uniform Evidence Law was the subject of a recent High Court appeal in *Dasreef Pty Ltd v Hawchar*.[6] Section 79 provides that '[i]f a person has specialised knowledge based on the person's training, study or experience [he or she will be permitted to express] an opinion ... that is wholly or substantially based on that knowledge'. The appeal presented the question whether this section incorporates three requirements: identification of the factual assumptions upon which the opinion is

4 '"Mere guesswork": Cross-lingual Voice Comparisons and the Jury'.
5 'Admissibility of Expert Evidence: Proving the Basis for an Expert's Opinion'.
6 (2011) 277 ALR 611 ('*Dasreef*').

based; that those assumptions be proven by admissible evidence; and exposure of the reasoning process underlying the expert's conclusions. The majority in *Dasreef* refrained from answering this directly, insisting that admissibility turned on the language of the section. However, the judgment provided some support for two of these requirements. Ordinarily the expert should identify the factual basis of their opinion, and should explain the connection between that factual basis and their opinion in order for s 79 to be satisfied. In a separate judgment, Heydon J held that while s 79 did not expressly require proof of the factual basis of an opinion, this was a feature of the common law basis rule which had not been abolished by the Uniform Evidence Law. The majority did not express a clear view on this third element. This important question of Australian evidence law remains unsettled.

The use and potential misuse of expert evidence is further explored by Simon Cole. His focus is latent fingerprint evidence in the US after the critical NAS report of 2009. While concentrating on latent print evidence, Cole's discussion has ramifications for other types of forensic evidence and other jurisdictions. The NAS made the point that the individualisation claims typically made by latent print examiners — 'this print (presumably left by the perpetrator) originated with the defendant, and could not have come from anyone else' — is quite simply unwarranted. It lacks any credible scientific basis. As Cole notes, in response to the NAS report, courts and forensic witnesses have moved away from the individualisation claim. However, they have not yet found a viable alternative expression of the significance of the match, and many of their qualifications to the individualisation claim are token. One expert witness, for example, merely acknowledged the possibility that the print might match 'some guy who lived in China 600 years ago'. Such a concession is so slight that it may make no perceptible difference to a jury's reception of the evidence; arguably the probative value of the evidence is still overstated. The obvious answer is for experts to state precisely the probative value of the latent print match. But, as of yet, the empirical methodology and data are lacking, and it has been questioned whether precise measures of subjective assessments of probative value are feasible or meaningful. As Cole concludes, the problem requires continuing attention.

The important question of how the strength of forensic evidence should be measured and expressed is also addressed in Andrew Ligertwood's article, which focuses on DNA.[7] It might have been thought DNA would not present such issues. After all, unlike latent prints, the science underlying DNA profiling has been thoroughly tested and is widely accepted. Indeed, as the NAS report notes, it is the strength of the science behind DNA forensics that has highlighted the

7 'Can DNA Evidence Alone Convict An Accused?'

shortcomings of the other forensic sciences. Moreover, DNA science provides a statistical measure of the probative significance of a match. A random match probability can be generated, which expresses the expected frequency of that DNA profile in a given population, and the chance that the match occurred coincidentally. The lower this figure, the greater the significance of the fact that the defendant's DNA profile matches the perpetrator's profile. In some cases random match probabilities are 'mind-bogglingly' small — one in billions or even trillions — lending what appears to be a great deal of support to the prosecution case. However, this only heightens the importance of the questions Ligertwood addresses — how can this figure be presented to the jury most informatively and fairly? And, is it permissible for a defendant to be convicted on the basis of a DNA match alone? As to the first, Ligertwood argues that probabilistic technicality should be avoided; a frequency figure should be provided, indicating how many people in the suspect population may also have the same DNA profile. As to the second, Ligertwood suggests DNA evidence alone may be sufficient. But he also questions whether DNA evidence will ever be entirely alone. If the DNA match is sufficiently strong to establish a prima facie case, it may call for a response from the defendant. If the defendant remains silent, that may be taken into account by the fact-finder in weighing up the significance of the match. If the defendant provides some innocent explanation, which is rejected in the face of the overwhelming forensic evidence, then the defendant's false explanation may be taken as evidence of consciousness of guilt, again providing support to the prosecution case. Ligertwood's account suggests that a DNA match can present the defendant with a Catch-22. That is not necessarily indicative of poor reasoning or unfair prejudice. It may simply reflect the power of a DNA match.

As Ligertwood notes, the High Court recently forewent the opportunity to address the question whether a conviction can rest on DNA evidence alone. Five justices of the High Court refused special leave in the Canberra cycleway sexual assault case, *Forbes v The Queen*.[8] Jeremy Gans in his article, 'A Tale of Two High Court Forensic Cases', points out that this is the second time that the High Court has avoided this issue. The previous occasion, involving latent fingerprints, occurred almost a century earlier in *Parker v The Queen*,[9] relating to the burglary of a Melbourne jewellery store. As Gans suggests, while the High Court's denial of special leave does not formally establish a precedent, for the High Court to allow the convictions to stand implies that such convictions can be safe. But Gans is not so much concerned with the appropriateness of this conclusion. Instead, by a forensic and contextual analysis of the High

8 [2010] HCAASP 18.
9 (1912) 14 CLR 681.

Court's treatment of the two cases, Gans questions the Court's appreciation of procedural justice. In both cases, in rejecting the defendants' appeals, the Court made observations about the great strength and reliability of the forensic evidence that were justified neither by the evidence in the case nor by sound science. Gans does not conclude from this that the High Court's refusal of special leave in each case left a wrongful conviction uncorrected. In both cases there was further information, not before the court, that tended to confirm the correctness of the convictions. Parker had a string of prior convictions and was linked with several unsolved burglaries. Forbes had been identified as the perpetrator in another cycleway sexual assault (although this was not strong enough to secure his conviction) and had also been arrested by police in suspicious circumstances on another evening at a cycleway. Against this background, the chance that the forensic match in *Parker* and *Forbes* was a coincidence, and that each defendant was actually innocent but incredibly unlucky, becomes perhaps vanishingly small. But to view these cases against that background raises some serious questions. First, did the High Court's knowledge of this inadmissible (arguably, or at least, not admitted) propensity evidence in each case influence their denial of special leave to appeal? Second, if the propensity evidence provides such reassurance of the rightness of the convictions, does this suggest that the propensity exclusionary rule operates too forcefully?

The articles of Ligertwood and Gans raise the critical question of the probative value of evidence. Indeed, this question is so fundamental that it is expressly or implicitly addressed in every other contribution to this volume, and most directly in James Franklin's article.[10] As Franklin explains, inherent in the concept of evidence is that it has a logical relation with a conclusion. The strength of this connection determines probative value which, at bottom, has an objective probabilistic nature. Franklin argues for an objective Bayesian conceptualisation of proof. It does not follow from this that numbers or equations need be employed by juridical fact-finders. A precise numerical measure will not always be accessible — it may not even exist — and even if figures were available the calculations may be computationally infeasible. What then is the significance of the objective Bayesian conceptualisation? For one, it suggests that there is, in principle, a correct measure of probative value. Proof is not a relativistic enterprise. It is more than a surface manifestation of underlying power relations. It is possible, in some cases at least, to say that juridical fact-finders are misevaluating evidence. The classic example is eyewitness identification evidence which has, in the past, been frequently overvalued leading to a series of wrongful convictions. Some of the other articles in this volume suggest that similar errors

[10] 'The Objective Bayesian Conceptualisation of Proof and Reference Class Problems'.

may be flowing from the systematic overvaluation of forensic identification evidence. In some situations, the objective strength of evidence can be measured statistically. Franklin's article provides foundational support for the arguments of Edmond, Coles and others, that courts and forensic scientists should be doing more to confirm the relevance and probative value of forensic evidence empirically.

Andrew Palmer's article[11] has a similar starting point to Franklin's. To say something is 'evidence' is to say it has a connection with something else; in a legal case, the 'fact in issue'. Franklin argues that this connection is logical. Palmer would agree, at least to the point that establishing this connection is not an inherently legal exercise. Proof, which flows from the construction of these connections, is not confined to the courtroom. It is central to much human activity. Building on the work of William Twining and others, Palmer argues that, while proof is not inherently legal and is a natural human activity, it is still something that should be taught in law schools. It is a crucial skill for lawyers, and also provides a necessary context for teaching evidence law. It might be added that a number of the critiques in this volume suggest that, natural though proof may be, courts, lawyers and forensic scientists still have trouble understanding it.

Evidence scholars are familiar with the notion that an item of evidence may be open to a variety of uses. A single piece of evidence may connect up to a particular conclusion by two different routes; for example, a witness's prior statement may be both credibility and hearsay evidence. A single piece of evidence may even connect up with competing conclusions; there may be evidence that the defendant's alibi is false, proving not innocence but consciousness of guilt; evidence that the murder victim warned the defendant off may prove either inculpatory or exculpatory motive. One of the trial judge's tasks is to control the various uses that evidence may be open to — shutting some off, advising caution with others. As Katherine Biber's article reveals,[12] the uses of evidence may continue to multiply long after the trial's completion. As an official record, evidence is placed on file, and then, under 'open justice' legislation and subject to certain restrictions, the archives are open for public inspection. As Biber discusses, it is not only historians and legal academics who examine filed crime scene exhibits. Increasingly, the material, particularly photographs or video footage of crime scenes, the victim and the defendant, is 'found' or 'appropriated' by artists and curators, and used as the basis for gallery exhibitions or coffee-table books. While some interpretations of archived evidence are sensitive and justified, unfortunately, this is not true of all. Biber suggests that if subsequent users of the evidence cannot be trusted to do so ethically, the Government, as custodian of

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11 'Why and How to Teach Proof'.

12 'Evidence from the Archive: Implementing the *Court Information Act* in NSW'.

archived evidence, may need to exercise greater control. As we move further into the 21st century, and technological developments free up information even further, the challenge of controlling the use of archived evidence in an open justice system can only increase.

The 21st century has only just begun and yet it has already posed many challenges to evidence law. Inevitably this collection of articles only touches the surface. Nevertheless, this volume provides grounds for hope that the community of evidence scholars will go some way at least towards meeting these challenges.

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