

A Tale of Two High Court Forensic Cases

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Abstract

The High Court of Australia has twice been asked whether a criminal conviction can be safely founded on forensic evidence alone. In both cases — in 1912 (on fingerprinting) and in 2010 (on DNA) — it refused special leave, effectively affirming the validity of such convictions, at least in some instances. Unfortunately, in each case, the Court's express reasons for refusing special leave relied on factual assertions that were not evidenced, tested or accurate. While other evidence suggests that substantive justice was most likely done in 1912 and 2010, the Court's shoddy approach to procedural justice had and has dangerous implications for the careful use of forensic evidence in Australian courtrooms.

Introduction

Recently, five judges of the High Court considered whether to hear an appeal addressing the following two questions in a rape case:

Whether the verdict was unjust or unsafe because DNA evidence standing alone was not capable of proving the applicant's guilt beyond reasonable doubt; and

Whether the verdict was unjust or unsafe having regard to the exculpatory evidence when the only evidence identifying the applicant was DNA evidence.¹

Ninety-eight years earlier, three High Court judges were asked to hear an appeal concerning a similar question in a theft case:

When the only evidence against an accused person depends upon the resemblance between fingerprints, as in this case, whether such evidence is sufficient to support a conviction?²

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¹ Short Particulars of Appeal, *Forbes v The Queen* [2010] HCAASP 18 (17 May 2010).

² *R v Parker* [1912] VLR 152, 153.

In both cases, the Court refused special leave, effectively accepting that a guilty verdict can be safely reached, and a person imprisoned, based solely on a single piece of forensic evidence, at least in some circumstances. Each Court went further, issuing brief reasons endorsing fact-finders relying on assertions about the likely individuality of a forensic match even though those assertions had no proven empirical basis.

While the issue of the safety of convictions based on a solitary piece of forensic evidence is an important question, this paper examines this pair of cases for a different reason: to analyse critically the way the apex of Australia's court system both reacts to and affects developments in the use of forensic science in courtrooms. To explore this issue, this paper compares the High Court's early and recent approaches by considering, not only the formal reasons for judgment, but also the broader facts and developments surrounding each case.

The first part describes the two trials and the issues that were presented to the High Court. The second part criticises the Court's reasons for disposing of both cases. The third part identifies evidence beyond the official record that presents the two convictions the Court upheld in a different light.

A Forensics in Two Trials

(a) Ed Parker and the Ginger Beer

When Lewis Cohen locked up Webster & Cohen's, his jewellery store in Melbourne's Little Collins Street, at 12:40 pm on Saturday 3 February 1912, he unwittingly left behind an informal security device.³ A boy named Albert Dunne had delivered two bottles of stone ginger beer in the morning and placed them in the back office so Cohen could drink them with his accountant that afternoon. However the accountant pulled out of the meeting, leaving the shop empty for the weekend. Reopening on Monday morning, Cohen discovered one of the two bottles — and one of his two safes — sitting open and empty on the floor of his office. The open safe revealed that jewellery worth hundreds of pounds had been stolen while the open bottle revealed the likely thief.

Detective Lionel Potter, head of Victoria Police's fingerprint branch, found three fingerprints on the ginger beer bottle. Two were

³ The facts are taken from the Court of Appeal judgment and contemporary newspaper reports: 'Safe-Breakers' Exploit: Jewellers' Premises Raided', *The Argus* (Melbourne), 6 February 1912, 6; 'Tell-Tale Finger-Prints: Man Committed for Trial', *The Argus* (Melbourne), 16 February 1912, 9.

hopelessly smudged, but the third was ‘very clear’ and matched neither Cohen nor Dunne. The next day, the police arrested Edward Parker at his house in North Melbourne, quickly had his fingerprints photographed and then sent the photos to Potter. Parker was charged after Potter declared that Parker’s middle left finger was the source of the print on the ginger beer bottle. Parker was committed for trial the following Friday, even though the prosecutor admitted that the matching fingerprint was the only evidence the prosecution relied upon.⁴ Testifying at the committal and, a month later, at Parker’s trial, Potter pointed out nine points of similarity in the ridges (and two similarly placed scars) in the pair of prints. He told the jury that he had examined 29 000 people’s prints and that no two individuals had the same ridges. Detective-Inspector Walter Childs from New South Wales confirmed Potter’s findings and gave similar evidence. After retiring for three hours, the jury convicted Parker of the theft of the jewellery.⁵

This ‘case of unusual interest’⁶ attracted attention across Australia, as did Parker’s appeal to the Supreme Court of Victoria a month later on a special case stated by Judge Johnston. At the hearing, Crown Prosecutor (and later judge and academic) Casimir Woinarski argued that fingerprinting was admissible just like any form of identification, but Chief Justice Madden pointed out that admissibility was not the same as sufficiency to convict.⁷ After a weekend break, Woinarski returned armed with examples of overseas reliance on fingerprinting: its use on documentation in India; its endorsement at the turn of the century by an English committee; and how ‘in America, a negro had been hanged upon finger-print evidence’. Madden CJ was unimpressed: ‘[i]t is easy to hang a negro in America’.⁸ Woinarski again switched tracks, saying that it would be unfortunate to impede efforts to trace crime and noting that Parker had refused to speak to the police, earning another hostile response from the Chief Justice.⁹ However, the remaining two judges directed their barbs at Parker’s

⁴ ‘Finger-Prints as Evidence: Interesting Victorian Case’, *The Advertiser* (Adelaide), 16 February 1912, 11.

⁵ ‘Finger Prints: Convict Warehouse Thief: Sydney Expert Called’, *The Argus* (Melbourne), 13 March 1912, 5.

⁶ *Ibid.*

⁷ ‘Finger-Prints: “Mistakes of the Past”: Full Court Case’, *The Sydney Morning Herald*, 13 April 1912, 18.

⁸ ‘Finger-Print Conviction: Value of the System: Judges Differ’, *The Argus*, 16 April 1912, 7. This appears to be a reference to the hanging of Thomas Jennings two months previously (on the same day Parker was committed.) Jennings had been arrested by four police officers after they noticed blood on his shirt, unaware of the nearby murder of Clarence Hiller. A fingerprint match between Jennings and wet paint at the crime scene was part of the prosecution case, but was far from the sole evidence against Jennings: Simon A Cole, *Suspect Identities: A History of Fingerprinting and Criminal Identification* (Harvard University Press, 2001) 177–81.

⁹ ‘It is the constitutional right of every person to hold his tongue in the presence of a policeman’: ‘Finger-Print Conviction: Value of the System’, above n 8, 7.

counsel. Justice Cussen dismissed criticisms of Potter's assertion that no two fingerprints are alike, saying that it was merely '[t]he enthusiasm of an expert', while Justice Hodges asked why 'mistakes in the past' should bar the Court from accepting fingerprinting as 'a scientific fact'.¹⁰

Unsurprisingly, the Supreme Court divided in its judgment and reasons. Justice Hodges compared the fingerprinting evidence favourably to eyewitness identification evidence.¹¹ Eight years earlier, the shortcomings of eyewitnesses were exposed when Adolf Beck was mistakenly identified by dozens of fraud victims, receiving guilty verdicts in two trials and serving five years in prison despite only bearing a passing resemblance to the real fraudster.¹² By contrast, fingerprinting evidence:

may be the safest of all evidence, as it does not depend upon the impressions caused by a momentary glance, but the impression is put on record, and the jury can see and judge for themselves as to the identity of the finger-marks, and the expert be merely a help to enable to the jury to use the evidence of their own eyes.¹³

Justice Cussen agreed, but with the caveat that a case based solely on forensic identification should be withdrawn from the jury if there was evidence suggesting that the mark in question was common or that the crime scene mark was open to innocent explanations.¹⁴ Chief Justice Madden's strident dissent argued that this could well be such a case, as the commonality or otherwise of fingerprints was something that 'jurymen know nothing in the world about' and that no comparison had been made with the many people who had handled the bottle prior to its sale to Dunne.¹⁵ Moreover, '[l]ooking at them myself, I am not at all satisfied that there is any marked similarity'.¹⁶

All the judges agreed on one point: that Potter and Childs should never have been allowed to testify that no two fingerprints were the same. Eleven years before the famous *Frye* decision in the United States,¹⁷ Chief Justice Madden held that there would be 'no more to be said' if the individuality of fingerprints 'were generally recognised by

¹⁰ 'Finger-Prints: "Mistakes of the Past": Judges Differ above n 7, 18.

¹¹ *R v Parker* [1912] VLR 152, 157–8.

¹² Colin Beaven, *Fingerprints: Murder and the Race to Uncover the Science of Identity* (Fourth Estate, 2003) 157–65.

¹³ *R v Parker* [1912] VLR 152, 158 (Hodges J).

¹⁴ *Ibid*, 159–61 Cussen J gave the examples of a shoe-print from a common shoe or an impression left by the knee off a pair of trousers.

¹⁵ *Ibid* 154, 156.

¹⁶ *Ibid* 154–5.

¹⁷ *Frye v United States*, 293 F 1013 (DC Cir 1923) ('*Frye*'), holding that expert evidence 'must be sufficiently established to have gained general acceptance in the particular field in which it belongs': at 1014.

scientific men' or was 'sufficiently studied to enable these propositions to be laid down as scientific facts'.¹⁸ But the nascent studies of fingerprinting pioneers Bertillon and Galton, 'doubtless highly intelligent persons' but 'mere observers', were insufficient, much less the oral testimony of Potter and Childs:

It must be assumed Detective Potter is a perfectly honest man. But let it be assumed that he was not an honest witness, but desired to injure the prisoner. How could his evidence be tested? He says that he has examined 29,000 persons with this result. Who can say he has not, and how can his statement be tested on cross-examination? Nobody can, and therefore the identity of the prisoner would rest on his *ipse dixit*.¹⁹

While the majority dismissed the admission of these unsupported scientific claims as harmless because the jury could view the prints in question themselves,²⁰ the Chief Justice disagreed: 'This is that kind of evidence that is particularly dangerous, for it carries with it a savour of mystery.'²¹

(b) Ben Forbes and the Black Bra

Ninety-three years to the day after a jury convicted Parker of theft, at around 10:00 pm, a man armed with a knife confronted a teenager on a bike path in the Canberra suburb of Lyneham.²² The teen was directed to some bushes where the man lifted her shirt, undid her bra and then forced her to place her hand and then her mouth on his penis. To solve such a crime, modern investigators are no longer limited to where the offender placed his fingers. Instead, the rapist's semen on the teen's trousers could be analysed to discern patterns in the rapist's genome. Tapes lifted from the inside and outside of the teen's black bra could also be analysed for genetic material. Five months later, a swab from Ben Forbes's mouth was found to contain genetic material consistent with the semen and his was one of at least three people's DNA found on the bra.

At Forbes' trial two years later, the roles of Potter and Childs were taken by Kirsty Pearson and Simon Walsh, respectively an employee of and a scientific adviser to the Biological Criminalistics section of the Australian Federal Police. Unlike fingerprinting experts (in 1912 and today), neither Pearson nor Walsh claimed to know who

¹⁸ *R v Parker* [1912] VLR 152, 154.

¹⁹ *Ibid.*

²⁰ *Ibid* 159.

²¹ *Ibid* 154–5.

²² The facts are from the Court of Appeal's judgment: *Forbes v The Queen* (2009) 167 ACTR 1.

left the semen and other genetic material on the teen's clothing. Indeed, they told the jury that they could not say that Forbes's genome was unique to him, much less the limited portions of the genome found in the clothing, and even less the 10 locations on the molecule the lab had analysed. Rather, relying on a database of the same 10 portions of the genomes of 620 residents of the Australian Capital Territory, both Pearson and Walsh would only testify about whether or not the same genetic patterns were likely to be found in an individual randomly selected from the Canberra population. They calculated that the analysed genetic material from the semen and the shared material from inside the teen's bra were likely to be found in fewer than one in a million ACT residents, while the shared material from the outside of the bra was likely to be found in one in 10 000 to 100 000 ACT residents.²³ Using a 'verbal scale' adopted in the Australian Federal Police's laboratory, Pearson and Walsh told the jury that, 'when considered in isolation from other information', these results were, respectively, 'extremely strong' and 'strong' evidence in support of the hypothesis that Forbes was the source of the semen and one of the sources of the material in the bra.²⁴

The focus of Forbes' 2007 trial was the 'other information' his jury was given. The prosecution later argued that there were four pillars to its case that Forbes was the rapist: the three DNA matches and the complainant's harrowing testimony about the rape.²⁵ However, this characterisation received a cold reception at Forbes's first application for special leave to appeal to the High Court. Chief Justice French remarked:

All of that goes to the proposition that the respondent [sic] was attacked by somebody in the way that she says she was attacked. But the real issue in the case was identity, was it not?²⁶

As Forbes' counsel pointed out, the four pieces of evidence established just one thing — that the complainant was raped by someone with a partial DNA profile in common with Forbes's — and that was all they established. Moreover, all the 'other information' at the trial was against the prosecution's hypothesis. The teen told police that her rapist was 'in his late thirties' and circumcised;²⁷ Forbes was

²³ Ibid 5 [15].

²⁴ Ibid.

²⁵ Transcript of Proceedings, *Forbes v The Queen* [2010] HCATrans 45 (12 March 2010) 386–401 (DF Jackson QC).

²⁶ Ibid.

²⁷ *Forbes v The Queen* (2009) 167 ACTR 1, 5 [14]. She also said that her attacker's height was between 175 centimetres and 180 centimetres: at 4 [11]. (However, see also the complainant's description of her attacker in *R v Forbes* (2009) 4 ACTLR 1, 5 [13] as being between 160 centimetres and 170 centimetres.) None of the available

27 (and was one of those people who ‘look younger than their age’²⁸) and uncircumcised.²⁹ The complainant also failed to pick Forbes’s photo out of a selection of eight pictures.³⁰ Also, Amanda Forbes testified that her husband was home on that Friday night caring for their three troubled children while she was ill.

After being found guilty by the jury, Forbes relied on both the single-faceted nature of the prosecution case and the exculpatory evidence to argue that the ACT Court of Appeal should quash his conviction as unsafe and unsatisfactory. In mid-2009, the ACT Court unanimously rejected Forbes’s appeal.³¹ Chief Justice Higgins and Justices Penfold and Besanko deemed all of the exculpatory evidence from the complainant equivocal because of the unlit crime scene, the complainant’s tightly closed eyes during her rape, and the inherent vagueness of characteristics like age and even circumcision.³² Amanda Forbes’ alibi was similarly inconclusive, given her admitted uncertainty when questioned seven months after the rape about her husband’s movements on a night when she was seriously ill to the point of needing hospitalisation days later.³³ As for the prosecution’s exclusive reliance on DNA evidence to link Forbes to the rape, the judges dismissed Forbes’ contention that statistical evidence was an inadequate foundation for a criminal conviction, noting the unquestioned admissibility of such evidence and the indefinable nature of the criminal standard of proof.³⁴ Indeed, relying on a textbook written by the High Court’s Heydon J, they observed that ‘fingerprint evidence, which in some respects is analogous to DNA evidence, is routinely admitted and may be decisive’.³⁵

judgments reveal Forbes’s actual height, but presumably it would have been mentioned if it was significantly outside of these ranges.

²⁸ *R v Forbes*, (2009) 4 ACTLR 1, 10 [43] (Gray J).

²⁹ *Forbes v The Queen* (2009) 167 ACTR 1, 5 [16].

³⁰ *Ibid* [13].

³¹ *Ibid* [49].

³² The Court dryly noted that there was no evidence of either ‘the morphology of the penis’ or the complainant’s knowledge of it: *ibid* 10 [44].

³³ *Ibid* 10 [47].

³⁴ *Ibid* 9 [36]–[41].

³⁵ *Ibid* 9 [39], citing Justice John Dyson Heydon, *Cross on Evidence* (LexisNexis Butterworths, 7th Australian ed, 2004) 309 [9095]. The relevant sentence appears to be one where Heydon states: ‘It will be an extremely rare case where mathematical techniques will make a decisive contribution to the resolution of forensic uncertainty’, which is accompanied by a footnote reading: ‘But not completely unknown; fingerprint or other forensic matching is often decisive.’ No authorities are provided for this remark.

B Forensics in Two High Court cases

(a) Samuel Griffith and the Unforgeable Signature

What a difference six weeks makes. On 12 April 1912, a full bench of the Supreme Court of Victoria unanimously ruled that police experts' assertions of the individuality of fingerprints were inadmissible as they lacked any scientific backing. On 23 May 23, the High Court declared that those same assertions required no backing at all. Refusing special leave to Parker's appeal, Griffith CJ wrote:

The fact of the individuality of the corrugations of the skin on the fingers of the human hand is now so generally recognised as to require very little, if any, evidence of it, although it seems to be still the practice to offer some expert evidence on the point...That is now recognised in a large part of the world, and in some parts has, I think, been recognised for many centuries. It is certainly now generally recognised in England and other parts of the British Dominions.³⁶

These remarks signal a much looser approach to the 'general recognition' test for the admissibility of expert evidence. The High Court makes no reference to recognition 'by scientific men' nor to the need for such assertions to be 'sufficiently studied'.³⁷ Precisely who is doing the recognising referred to by Griffith CJ — 'mere observers' like (fingerprinting pioneers) Bertillon and Galton, police officers like (Parker trial witnesses) Potter and Childs, courts, judges in their private reading? — isn't specified. Certainly, the High Court received no submissions in support of fingerprinting; Parker's application for special leave was made *ex parte*.

Interestingly, in the weeks between the Supreme Court's ruling and the High Court's ruling, Sir Melville Macnaghten, head of the London Metropolitan Police's criminal investigation department, visited Melbourne. Coincidentally, he had been holidaying in Australia in a bid to recover his failing health. Now best remembered for his ruminations on the identity of Jack the Ripper, Macnaghten was a key figure in the history of fingerprinting: apart from his senior role at Scotland Yard, he also led the inquiry into the Beck case; was the detective responsible for solving the landmark 'Mask Murders' case; and was a member of the pro-fingerprinting English committee previously cited by Woniarski.³⁸ One week after the Supreme Court's

³⁶ *Parker v The King* (1912) 14 CLR 681, 683.

³⁷ Compare *R v Parker* [1912] VLR 152, 154 (Madden CJ).

³⁸ See Beaven, above n 12.

divided ruling, an interview with Macnaghten was published in newspapers around Australia under the headline ‘An Infallible System’:

‘The introduction of the finger-print system has almost revolutionised crime,’ said Sir Melville, when questioned concerning its efficacy, ‘and for the last ten years it has been found to work with perfect smoothness right throughout the British Isles; and some 185,000 slips are now recorded at Scotland Yard. The idea is not entirely new,’ said Sir Melville, smiling, ‘as the value of finger-prints were known to the Chinese in the time of the Great Mogul, when deeds were stamped by means of thumb impressions’.³⁹

In referring to tens of thousands of fingerprint records, Macnaghten (like Potter and Childs in their evidence at Parker’s trial) confuses the use of fingerprinting as a bureaucratic identification system (where files of full sets of prints are matched against each other to confirm the identity of known prisoners) with its use as a forensic identification system (where unknown crime scene marks are matched to selected suspects).⁴⁰ The former system was indeed well established by 1912 and had much more ancient roots. The latter use, far from being ‘recognised for many centuries’,⁴¹ had its origins in the 1860s and was rare even in the 1900s.⁴²

As Henry Faulds (an antagonist of Macnaghten) tirelessly but fruitlessly pointed out during similar debates in England, the difference between the two systems is that the former involves comparisons of all 10 prints of both targets, each collected in carefully controlled circumstances, while the latter involves comparisons with (typically) a single, partial print that is often smudged or difficult to discern.⁴³ When Potter and Childs told Parker’s jury that they had never seen a false match in 29 000 people’s prints, they were actually referring to full sets of pristine prints rather than the much reduced numbers of single print identifications either was likely to have experienced at that point. Macnaghten’s interview only addressed the evidence for the individuality of single prints (like the one on Parker’s middle left finger) once:

³⁹ ‘Tell-Tale Fingerprints: Scotland Yard Chief’s Testimony’, *The Argus* (Melbourne), 23 April 1912, 6.

⁴⁰ Modern digital fingerprinting methods permit the use of computers to match unknown crime scene marks to individual prints. However, in 1912, card-based search systems for fingerprints only worked if all 10 prints were known and therefore could not be used to identify most latent prints.

⁴¹ *Parker v The King* (1912) 14 CLR 681, 683 (Griffith CJ).

⁴² Cole, above n 8, Ch 7. See also Beaven, above n 12, 187: ‘In 1906, around Britain, police prosecuted four separate cases on fingerprint evidence’.

⁴³ Henry Faulds, *Guide to Finger-Print Identification* (Wood, Mitchell & Co, 1905), 52.

According to Sir Francis Galton, there would be no chance of two similar finger-prints in twelve thousand millions. That refers only to one finger-print, so the risk is again enormously lessened when one gets to a combination of ten.⁴⁴

Not only does Macnaghten again direct attention towards bureaucratic identification, but even Galton's (largely guessed)⁴⁵ statistic was concerned with picture perfect prints, rather than latent ones (like the one on the ginger beer bottle).

Whatever its basis, the Chief Justice's new take on the individuality of fingerprints made Parker's argument about the safety of a conviction based on solitary forensic evidence untenable. Just like Twain's *Pudd'nhead Wilson*,⁴⁶ the analogy Griffith CJ preferred was not to other physical forms of identification, but to an artificial identifier:

Signatures have been accepted as evidence of identity as long as they have been used...A fingerprint is therefore in reality an unforgeable signature... If that is so, there is in this case evidence that the prisoner's signature was found in the place which was broken into, and was found under such circumstances that it could only have been impressed at the time when the crime was committed. It is impossible under those circumstances to say there was no evidence to go to the jury.⁴⁷

The supposed 'unforgeability' of fingerprints was brought into question just one year later, when a San Francisco man claimed to be able to transfer latent fingerprints between objects.⁴⁸ Handwriting experts soon argued that it was much easier to forge fingerprints than signatures, because the latter are the product of human volition.⁴⁹ While such claims may be dismissed as self-serving, they were given surprise support in later decades when US police officers (including, in one crucial meeting, one named Edward Parker!)⁵⁰ began to report actual cases of fabrication of prints, culminating in the revelation in 1992 that members of the New York State Police had been routinely forging

⁴⁴ 'Tell-Tale Fingerprints', above n 37, 6.

⁴⁵ David A Stoney and John I Thornton, 'A Critical Analysis of Qualitative Fingerprint Individuality Models' (1986) *Journal of Forensic Science* 1187, 1188–90.

⁴⁶ Mark Twain, *The Tragedy of Pudd'nhead Wilson* (Echo Library, 2006) 103: 'These marks are his signature, his physiological autograph, so to speak, and this autograph can not be counterfeited, nor can he disguise it or hide it away, nor can it become illegible by the wear and mutations of time.' The High Court was considering a case of forged signatures at the time it refused Parker's appeal: see *R v Finlayson* 14 CLR 675.

⁴⁷ *Parker v The King* (1912) 14 CLR 681, 683.

⁴⁸ Cole, above n 8, 275.

⁴⁹ *Ibid.*

⁵⁰ *Ibid.* 278.

fingerprints to supplement weak cases.⁵¹ In Australia, a claim of forged prints reached the High Court in 1989 in the infamous *Mickelberg* matter, where part of the evidence that the brothers had swindled the Perth mint was a single print on a forged cheque.⁵² While the Court rejected the appeal, the brothers were acquitted five years later after new claims of police misconduct arose that, among other things, meant that ‘it would be open to a jury to conclude that there is a reasonable doubt as to the genuineness of the fingerprint’.⁵³

In one respect, the High Court’s endorsement of convictions based solely on fingerprints in 1912 was ahead of its time. American courts took three more decades to reach the same conclusion in a judgment relying on, among other authorities, Griffith CJ’s own remarks.⁵⁴ However, in other respects, the High Court’s bullish attitude towards the science of fingerprinting was (and remains) premature. While police and court use of fingerprinting has indeed become commonplace, the discipline has fallen on hard times this century. The catalyst is DNA profiling, which is not only generally more robust than fingerprinting as a natural identifier in criminal investigations, but has also emerged as a gold standard for scientific forensics. DNA profiling, founded on and applying the 20th century’s greatest scientific triumph — the unlocking of the genetic structure and its biological role — was initially developed for non-forensic purposes; continues to be the subject of intense global research in both academic and commercial settings; and has had its claims tested in both peer-reviewed scientific journals and repeated judicial hearings. By contrast, ridge corrugations remain a little understood quirk of early foetal development, whose use and utility is almost entirely confined to in-house police technicians, with virtually no peer reviewed analysis and — thanks in part to judgments like *Parker v The King* — no serious judicial examination until recently.⁵⁵

The divide between DNA profiling and fingerprinting is most visible in the courtroom where DNA analysts like (Forbes trial witnesses) Pearson and Walsh cheerfully concede to defence counsel that DNA profiles may be shared by more than one individual, while modern fingerprinters firmly testify (as Potter and Childs did in 1912 and as professional associations compel them to do today) that a match between a latent and known print is exclusive of all other individuals. In place of DNA profiling’s alleles, databases and random match probabilities, fingerprinters offer diagrams of ‘Galton points’ that recall (and, in scientific terms, resemble) a ‘spot the difference’ puzzle in the

⁵¹ Ibid 274–81.

⁵² *Mickelberg v The Queen* (1989) 167 CLR 259.

⁵³ *Mickelberg v The Queen* (2004) 29 WAR 13, 168 [607] (Steytler J).

⁵⁴ *Grice v State*, 151 SW 2d 211, 219–20 (Tex Ct Crim App1941).

⁵⁵ See generally Cole, above n 8.

kids' section of the newspaper. The falsity of their claims to individualise with a 'zero error rate' has been exposed in high-profile errors, such as the FBI's 'matching' of an Oregon lawyer to the remnants of one of the bombs detonated in Madrid in 2005, a week before Spanish police matched the same print to an Al Qaeda operative. As documented by the University of California's Simon A Cole, the characteristics of a string of known fingerprinting mistakes indicate that these errors are almost certainly the tip of the iceberg of a century of false or flawed identifications.⁵⁶ The decline of fingerprinting became official the same year the ACT Court of Appeal in *R v Forbes* drew its analogy between DNA profiling and fingerprinting. In 2009, the US National Research Council of the National Academies singled out nuclear DNA analysis as the lone forensic science with appropriate scientific foundations⁵⁷ and damningly classed fingerprinting with junk forensics, such as hair analysis, as founded on largely 'subjective criteria'.⁵⁸

(b) Dyson Heydon and the Mad Scientists

What a difference six months makes. On 17 June 2009, the ACT Court of Appeal dismissed Forbes's argument that DNA-only convictions are unsafe, citing the criminal burden of proof, the analogy to fingerprinting and the admissibility of statistical evidence.⁵⁹ By December that year, Australian DNA profiling was in deep crisis.

On 7 December, the Victorian Court of Appeal quashed the rape conviction of Farah Jama after the prosecution conceded that the DNA match which was the sole basis for its case against the teenager was so specious that it was likely that the rape itself had never even occurred.⁶⁰ Two days later, Victoria Police revealed that they had temporarily halted all DNA testimony in the state's criminal trials, citing problems with the statistics used in the police's laboratory.⁶¹ Although neither of

⁵⁶ Simon A Cole, 'More Than Zero: Accounting for Error in Latent Fingerprint Identification' (2005) 95 *Journal of Criminal Law & Criminology*, 985, 1001–17, describing 22 reported cases of misattribution 'using conservative selection criteria'.

⁵⁷ National Research Council of the National Academies, *Strengthening Forensic Science in the United States: A Path Forward* (National Academies Press, 2009).

⁵⁸ *Ibid*, 141–2.

⁵⁹ *Forbes v The Queen* (2009) 167 ACTR 1, 9 [39]–[41]

⁶⁰ *R v Jama* (Unreported, Supreme Court of Victoria – Court of Appeal, Warren CJ and Redlich and Bongiorno JJA, 7 December 2009), 1.

⁶¹ Simon Overland, 'Statement From Chief Commissioner Regarding DNA Interpretation by Victoria Police Forensic Services', 9 December 2009 announcing: 'Late yesterday, following a number of briefings, I issued a direction that until further notice Victoria Police Forensic Services Staff will not be providing any statements or evidence to any parties in relation to DNA interpretation. This means that no DNA evidence will be presented to the courts as part of any case until further

these developments was mentioned at Forbes' first application for special leave four months later, the Chief Justice's and Crennan J's decision to refer Forbes's application for special leave to an expanded court was recognised by the media (in both local press and international journals) as presaging a 'landmark DNA challenge'.⁶²

Expectations were further raised when the Victorian government released reports into both DNA debacles. Former Supreme Court Justice Frank Vincent's report into the Jama case, while concluding that contamination was to blame for the miscarriage of justice, nevertheless slammed the lawyers in the case for ignoring early DNA case law casting doubt on the safety of DNA-only convictions.⁶³ Eleven days later, Heydon J characterised Forbes's appeal grounds as follows:

Your case is really that that which supported the Crown's versions of events is a nothing. It is just an abstraction, it is mad scientist stuff.⁶⁴

However, neither Forbes nor anyone else was questioning the science behind DNA profiling. Rather, just as in fingerprinting cases, the problem lies in the transfer of processes that work well in controlled settings into the messy realities of crime scenes and courtrooms.

Although lacking the drama of Jama's acquittal, the simultaneous revelation of a flaw in the statistical testimony of Victoria's police experts went to the heart of how courts make use of DNA evidence. Although the core claims of DNA's identity throughout the human body, its transmission through human reproduction and its distribution throughout human society are backed by peer-reviewed science, a key component of the use of DNA in criminal justice has much weaker foundations. The treatment, analysis and interpretation of DNA in real-world crime scene samples are largely the domain of police labs and the companies that supply them. An example of a particularly problematic category of crime scene samples are those

notice.' The direction was rescinded on 12 January 2010: Victoria Police, 'Victoria Police to Resume DNA Analysis', media release, 12 January 2010.

⁶² Samantha Donovan, 'High Court to Hear Landmark DNA Challenge', *ABC News* (online), 18 May 2010 <<http://www.abc.net.au/news/2010-05-18/high-court-to-hear-landmark-dna-challenge/> 830536>. See also Chris Merritt, 'Challenge in Courts over DNA Evidence', *The Australian* (Canberra), 30 March 2010, 3; Philip Hunter, 'Anything You Touch May be Used Against You' (2010) 11 *EMBO Reports* 424, 424.

⁶³ The Hon Frank Vincent, *Report: Inquiry Into the Circumstances That Led to the Conviction of Mr Farah Abdulkadir Jama* (Victorian Government Printer, May 2010), available at <<http://www.justice.vic.gov.au/wps/wcm/connect/5a103e804263c8da810e832b0760a79a/VincentReportFinal6May2010.pdf?MOD=AJPERES>> ('Vincent Report') 45–6, referring to *R v Green* (unreported, NSWCCA, 26 March 1991) and *R v Pantoja* (1996) 88 A Crim R 534.

⁶⁴ Transcript of Proceedings, *Forbes v The Queen* [2010] HCATrans 120 (18 May 2010) 660–2.

from the bike path complainant's bra, which yielded a 'partial mixed DNA profile' of at least three people's DNA.⁶⁵ The experts' characterisation of this sample as consisting of partial profiles from the complainant, Forbes and an unknown person depended on myriad contestable assumptions (eg as to the number of contributors; which alleles can be associated with which person; and the genetic 'noise' that can appear in low-grade samples) that, in turn, feed into the statistical calculations as to whether or not a randomly chosen person will also be matched to the bra.

So, the critical distinction between controlled comparisons and crime scene comparisons has an analogue in DNA profiling, which has a messy end that is likewise dominated by 'subjective criteria'. The potential impact of those criteria was highlighted in Vincent's report, where he noted that the most conservative random match probability for the DNA evidence against Jama shifted during the proceedings from a range of 1 in 45 billion in 2007 down to 1 in 150 million in 2009.⁶⁶ The simultaneously released external review into Victorian statistical testimony revealed that the change in figures was due to a decision by the Victoria Police laboratory in mid-July 2009, following some brutal cross-examinations of its experts by defence barristers, to remove 'the "professional judgment" of individual case managers' from its analytical processes.⁶⁷

In contrast to Heydon J, more recent High Court appointee Bell J recognised that the safety of DNA-only convictions shifted with the random match probabilities. She put to Forbes' counsel:

Mr Hastings, if, instead of going for the larger proposition, one were to look at the smaller proposition, which is that this verdict was unsafe, Mr Crown went to the jury on the basis of asking, does the science tell you that the only person who could have committed the act was the accused, the evidence in the way that it was presented, and looking at this for present purposes on a view that at one stage Mr Walsh's evidence was consistent with a view of

⁶⁵ *Forbes v The Queen* (2009) 167 ACTR 1, 5 [15].

⁶⁶ Vincent, above n 61, 41: 'The amazing variations in the ranges within which the separate likelihood ratios were determined and the changes in the ratios in such a short period could hardly engender confidence in the use of such statistical techniques in evidence.'

⁶⁷ Jim Fraser, John Buckleton and Peter Gill, *Review of DNA Reporting Practices by Victoria Police Forensic Services Division* (April 2010) Victoria Police News, 3 <http://www.vicpolicenews.com.au/images/stories/news/feature_story/victoria%20police%20forensic%20services%20review%20%20report%20%20april%202010.pdf> ('Review of DNA Reporting Practices'). The Review of DNA Reporting Practices concluded that both the old and new approaches were wrong and that 'the DNA profiling technique cannot be deskilled to such an extent'. Rather, police labs should acknowledge, embrace and refine the role of 'essential tacit knowledge' in their work.

an expected random match of one in a million, then absent any other circumstance, is not your point that that lacked sufficient cogency to support a verdict beyond reasonable doubt since, whilst it showed the accused was likely to be the contributor of the sample equally in a population the size of Australia, it might be assumed that there were others who would answer the description of being a sexually active male who, on the statistical evidence that was presented, one might expect to find had the same genotype?⁶⁸

As the Australian band *The Whitlams* recognised a decade earlier, if a girl is ‘one in a million’, that means that ‘there’s five more just in New South Wales’.⁶⁹ Likewise if a rapist is one in a million. Pearson’s and Walsh’s evidence that the likelihood ratio relating to Forbes’s matches to the inside of the complainant’s bra and her trousers was ‘greater than 1 million’⁷⁰ meant that the DNA evidence offered against Forbes was likely to equally implicate two or three other adult men within a day’s drive of Lyneham (who may better match the complainant’s ID.) These numbers compared favourably to an English case from a decade earlier when Robert Watters was convicted solely on the basis of a DNA match to cigarettes left at the scene of five break-and-enters.⁷¹ On appeal, the prosecution adduced evidence that there was a ‘1 in 29000’ chance that the DNA profile might also be shared by either of his two brothers, neither of whom had been either profiled or otherwise excluded from the case. Quashing the conviction, the Court of Appeal observed that the odds ‘certainly make it unlikely, perhaps unlikely in the extreme, that it was the brother, but they are not sufficient, taken on their own, to enable one to be sure that it could not be the brother in the circumstances of this case.’⁷²

Unfortunately for Forbes, the High Court resolved his case using a different figure altogether. In *ex tempore* remarks rejecting the special leave application, French CJ noted that the prosecution’s case was left:

⁶⁸ *Forbes v The Queen* [2010] HCATrans 120, 18.

⁶⁹ Tim Freedman, ‘Up Against the Wall’, *Eternal Nightcap* (Black Yak Phantom, 1997).

⁷⁰ *Forbes v The Queen* (2009) 167 ACTR 1, 5 [15] (emphasis added). This category applied to the samples from the inner surface of the complainant’s bra and from the semen on her trouser leg. The sample from the outer surface of her bra was classified as having a likelihood ratio of ‘greater than 10,000 but less than 100,000’.

⁷¹ *R v Watters* [2000] EWCA Crim 89 (19 October 2000). The Crown, like the prosecution in Forbes’s special leave hearing, argued that there was other evidence: the fact that Watters was male (‘like most safe-crackers!’) and that he admitted that he had been on his way to purchase a packet of cigarettes (the incriminating DNA was found on a cigarette): at [10].

⁷² *Ibid* [25] (Kay LJ).

without the jury being told that the particular conclusions made by the witness in the case had yielded a figure of greater [*sic* – less] than one in 10 billion.⁷³

While not strictly a precedent, the refusal of special leave effectively rules out Forbes' argument that DNA-only convictions are unsafe 'in principle'. Although the Court left the way open for the point to be explored in a subsequent case,⁷⁴ it is clear that convictions based on random match probabilities that render it unlikely that there is another matching profile presently on the planet are safe in Australia. (As for Forbes's distinct special leave ground that his conviction was unsafe '*having regard to the exculpatory evidence* when the only evidence identifying [him] was DNA evidence', French CJ's remarks simply ignored it.)

But where did the 'one in 10 billion figure' come from? As French CJ noted, neither it nor any figure other than 'greater than 1 million' was before the jury or, for that matter, the ACT Court of Appeal. Rather, it was introduced by the prosecution at the High Court hearing on the basis that it was contained in 'a document which [was] referred to' at a *voir dire* prior to Forbes's trial.⁷⁵ One difficulty with this approach is constitutional, as the High Court held in the *Mickelberg* case that it cannot receive fresh evidence.⁷⁶ A second difficulty is procedural because, as will be seen, the prosecution's reliance on different, more incriminatory, statistical evidence contradicts an agreement reached with the defendant at the trial. But the greatest problem is that the High Court's apparent reliance on the figure of '1 in 10 billion' ignores how the calculation of such figures (especially in mixed sample cases like Forbes's) is controversial and highly variable, even within police labs. There is no guarantee that the prosecution's experts, if asked to testify at the trial or on appeal, would have stuck to that figure or that it would not have been effectively challenged in cross-examination or by an opposing defence expert. A shift of similar magnitude to the one in the Jama case between his conviction and appeal would have brought the 1 in 10 billion figure

⁷³ *Forbes v The Queen* [2010] HCATrans 120 (18 May 2010) 2748–50.

⁷⁴ '[T]his is not, in our opinion, a suitable case to consider the larger question which the applicant seeks to agitate': *ibid* 2754–5 (French CJ).

⁷⁵ *Ibid* 1149–63, 2299–313, referring to 'Exhibit E'. The random match probabilities were described as '1 in 20 billion', with a confidence interval between '1 in 13 billion' and '1 in 31 billion.'

⁷⁶ *Mickelberg v The Queen* (1989) 167 CLR 259, 298–9. Absurdly, this rule does not formally apply in special leave hearings (including, presumably, matters heard as if they are an appeal, like Forbes's application): *Re Sinanovic's Application* (2001) 180 ALR 448, 451 [7] where Kirby J stated: 'Although evidence can be received at a special leave hearing (for example, to show the significance of a case for other cases) it will not be received as fresh evidence relating to the subject of the proceedings because to receive it would be futile having regard to the fact that it could not be used in the appeal.'

closer to 1 in 30 million, ie suggesting a good chance of another match in Australia and hundreds more across the planet.

So, 98 years after the High Court refused special leave to Ed Parker on the basis of an unproven assertion as to the individuality of fingerprints (possibly based on (fingerprinting pioneer) Galton's calculation of a one in 16 billion probability of a matched pair), the same court refused special leave to Ben Forbes on the basis of an unproven claim that the chance of a random person having his DNA profile was less than one in 10 billion. It might be thought that the *Forbes* High Court at least improved on the *Parker* one by confining its armchair forensics to Forbes's particular case, rather than the entire field of DNA profiling. Alas, as will be seen next, the remainder of French CJ's remarks are more than a match for Griffith CJ's in their egregiousness.

(c) Robert French and the Conclusionary Labelling

What a difference 66 days makes. The very first question French CJ put at Forbes's first special leave application on 12 March 2010 was about the expert assessment of the DNA evidence that the jury actually got to hear:

FRENCH CJ: Was there any objection taken to the conclusionary labelling of particular statistical results as strong or extremely strong evidence?

MR HASTINGS: No, your Honour. That seems to be now part of DNA law. There seems to be a common practice now of putting labels on the statistical results - - -

CRENNAN J: An agreed discourse. In other words, agreed terms which keep being repeated.⁷⁷

The same evidence dominated the Chief Justice's remarks rejecting special leave on 18 May:

At trial in this matter the parties acquiesced in the statistical conclusions drawn from evidence relating to DNA profiles being expressed qualitatively rather than quantitatively. More particularly, they acquiesced in the expression of the statistical conclusions drawn from analysis of material taken from the complainant's clothing being compared with the applicant's DNA profile as comprising "strong" or "extremely strong" evidence in support of the contention that the applicant was the source of the material taken from the complainant's clothing...

⁷⁷ Transcript of Proceedings, *Forbes v The Queen* [2010] HCATrans 45 (12 March 2010) 40–8.

It was open to the jury to conclude from the evidence that was led at trial that the applicant was guilty beyond reasonable doubt. In light of the way the parties conducted the trial this is not, in our opinion, a suitable case to consider the larger question which the applicant seeks to agitate. It is the opinion of all of us that special leave should be refused.⁷⁸

In other words, the High Court's primary reason for refusing special leave to Forbes was that the DNA evidence against him was accompanied by sufficient qualitative assertions as to its strength.

The qualitative evidence given in Forbes's trial was summarised in the intermediate appeal judgment as follows:

Ms Pearson explained that there is a verbal scale of 'strong' evidence, 'very strong' evidence and 'extremely strong' evidence. She said that those are the terms used in the laboratory and that they are based on statistical calculations which are performed. Ms Pearson said the results, in the case of the tape lift from the outside of the right and left cups of the black bra, provided strong evidence to support the contention that the appellant's DNA is located within the crime scene sample.⁷⁹

In the High Court, the prosecution's counsel read out the relevant part of Pearson's testimony:

MR WALKER: What we do is we look at the entire 10 sites across the DNA profiles, calculate a statistical calculation, and then use the verbal wording scale to provide an opinion.'...

FRENCH CJ: She is telling the jury at this point, is she not, that notwithstanding the statement in the report that "it is my opinion that it is extremely strong evidence", that this is, in effect, a verbal tag onto a particular number range without saying what the numbers are?

MR WALKER: Yes, and the jury is about to be told more than that. But yes, she is. This is not her opinion in what I might call-annexure.

FRENCH CJ: It is not an independent judgment she makes about the numbers.

MR WALKER: - - - in a personal sense. She could call it red as opposed to blue. The importance of it is, of course -
- -

⁷⁸ Transcript of Proceedings, *Forbes v The Queen* [2010] HCATrans 120 (18 May 2010) 2741–56.

⁷⁹ *Forbes v The Queen* (2009) 167 ACTR 1, 7 [23].

FRENCH CJ: Or she might have said beyond reasonable doubt.⁸⁰

Given that there is no account for the origins of the words ‘strong’ and ‘extremely strong’ other than the Court of Appeal’s summary of Pearson’s evidence (extracted above) that they were ‘terms used in the laboratory’, they are clearly incapable of satisfying the rules for the admissibility of expert evidence.⁸¹ As the High Court itself recently ruled, the absence of any proved or inferable connection between an opinion and the expertise of a witness is fatal to admissibility.⁸² Indeed, the evidence may fail the test of relevance, which requires a rational link between the evidence and the conclusion to be drawn, something that appears lacking in claims that mere ‘terms used in the laboratory’ bear on the strength of evidence proffered in a criminal trial.⁸³

However, it is clear that their use was the product of an agreement between the opposing lawyers at Forbes’s trial, which also kept the claimed random match probability of less than ‘1 in 10 billion’ from the jury:

Of course, we know from the voir dire that everyone knew what Ms Pearson was referring to by way of the scale, but the jury had not heard that. That is one subject of the agreement. The other subject of the agreement, of course, is the expression ‘strong and extremely strong’, ‘greater than a million to 1, strong being greater 10,000 to 1’, ‘no objection taken to that’. That is what defence counsel is recorded as agreeing and that is what I mean by the agreement.⁸⁴

As Heydon J immediately observed, this agreement failed to comply with the statutory rules for waiver of the rules of evidence or agreed facts.⁸⁵ Nevertheless, Forbes’ counsel didn’t (and, probably, couldn’t) belatedly object to the admissibility of those terms in the High Court.

Nevertheless, no agreement about admissibility could alter the weight (or lack of weight) of these terms as evidence against Forbes. It is straightforward to see that the words ‘strong’ and ‘extremely strong’ were not only mere ‘tags’ or ‘labels’, but were highly misleading when used in relation to the DNA evidence against Forbes. One problem is

⁸⁰ Transcript of Proceedings, *Forbes v The Queen* [2010] HCATrans 120 (18 May 2010) 2090–113.

⁸¹ *Evidence Act 1995* (Cth) ss 76–79.

⁸² *Dasreef Pty Ltd v Hawchar* [2011] HCA 21, [41]–[42].

⁸³ *Evidence Act 1995* (Cth) ss 55–56.

⁸⁴ Transcript of Proceedings, *Forbes v The Queen* [2010] HCATrans 120 (18 May 2010) 2362–5 (B W Walker SC).

⁸⁵ *Ibid* 2370–81. See *Evidence Act 1995* (Cth) ss 190–1. Among other things, s 190 requires a court order, while s 191 requires that the agreement be placed in writing.

that claims about the strength of one piece of evidence may be misunderstood by the jury as claims about the defendant's guilt; however, both Pearson and Walsh (but, alas, not French CJ) were scrupulous in saying that the labels only applied when the DNA evidence was 'considered in isolation from other information'.⁸⁶ But while this clarifies the special way the terms were being used by Pearson and Walsh, it also exposes their speciousness.

Consider the label given to the random match probability of between one in 10,000 and one in 100,000 that applied to the partial DNA profile matching Forbes that the experts discerned within the mixed sample on the outside of the bra. Pearson and Walsh told the jury that this random match probability was 'strong evidence to support the contention that [Forbes'] DNA is located within the crime scene sample'. But, 'considered in isolation from other information', this evidence implies that there were likely to be between four or so and dozens of other matches to this DNA profile in Canberra alone, not to mention many more in New South Wales. How can any inference from this evidence that Forbes was a contributor to the bra sample be described as 'strong'? To the contrary, it is laughably weak, *unless* there is other information linking Forbes to the rape. Likewise, the lower random match probability for the inside of the bra and the trousers allows for three or four other matches in New South Wales. Obviously, that supports a stronger inference than the outside bra match, but how can it possibly be labelled 'extremely strong' *on its own*?⁸⁷ In short, the terms used by Pearson and Walsh at Forbes's trial were not only unsupported but totally wrong in any DNA-only trial, let alone one where there was evidence of contrary identification and an alibi.

Nevertheless, it could be argued that Forbes, by agreeing (and certainly not objecting) to the admission of those terms in evidence at his trial, must live with the consequences, especially as the bargain kept a different, and likely more damning, assessment of the random match probabilities for the inner bra and trousers evidence from the jury. The

⁸⁶ *Forbes v The Queen* (2009) 167 ACTR 1, 5 [15]. Cf French CJ's description of the evidence as asserting that the DNA matches were "strong" or "extremely strong" evidence in support of *the contention that the applicant was the source of the material taken from the complainant's clothing*': Transcript of Proceedings, *Forbes v The Queen* [2010] HCATrans 120 (18 May 2010) 2746–8 (emphasis added).

⁸⁷ The labels also ignore non-statistical features of the DNA evidence that may also greatly weaken the case, including both the risk of contamination (as in Jama's case) and the more mundane risk of innocent reasons for the presence of the defendant's DNA at the crime scene. Cf *Clark v People*, 232 P 3d 1287 (Colo Sup Ct, 2010); *People v Clark*, 214 P 3d 531, 537–8 (Colo Ct App, 2009); *R v DDT* (2009) 257 OAC 258 (Ontario Court of Appeal) (a fingerprinting case). For an analysis of a Victorian DNA-only case raising this difficulty see Jeremy Gans, *Hard Lessons from the Farah Jama Case* (11 May 2010) Crikey <<http://www.crikey.com.au/2010/05/11/hard-lessons-from-the-farah-jama-case/>>.

response is that Forbes's conduct only bars him from objecting to the admission of those terms. The bargain did not (and could not) change the requirement that any conviction must be based on sufficient evidence to satisfy a reasonable jury to the criminal standard and leaves it open for him to argue that the evidence couldn't meet that standard, both at the trial and on appeal. In that light, it was really the prosecution that made a bad bargain. Notably, the prosecution, like Forbes, also had something to gain from keeping the one in 10 billion figure from the jury. In response to French CJ's queries, the Director of Public Prosecution's counsel said that:

one of the reasons for using terms of that kind as appears from the material in the case, was to avoid endeavouring to give figures which are mathematical, in a sense, and present an air of mathematical certainty which otherwise might be more confusing to a jury.⁸⁸

It is also possible that, like Victoria's police laboratory, the Director of Public Prosecutions was hoping to avoid withering defence cross-examination of the 'subjective elements' of how random match probabilities are calculated in relation to complex samples like those on the bra. So, the prosecution too should have faced the consequences of willingly choosing to trade precise statistical claims for vague ones accompanied by meaningless labels.

Instead, French CJ allowed the prosecution to escape those consequences, first by drawing on the withheld statistics anyway and then by recasting qualitative tags as 'conclusions'. The *coup de grâce* was his own conclusion:

It was open to the jury to conclude from the evidence that was led at trial that the applicant was guilty beyond reasonable doubt.⁸⁹

This holding can only mean that the High Court considered it open for a rational jury to treat the meaningless labels given by the police's experts to the DNA evidence against Forbes as meaningful enough to support a conviction, either on their own or alongside random match probabilities of less than one in a million. That is, the jury could properly convict someone solely on the basis of a forensic biologist's unexplained assertion that DNA evidence that could match four or five others in ACT and NSW was 'extremely strong' evidence on its own against Forbes.

By recasting forensic slogans as scientific evidence, and then permitting them to found a criminal conviction, the High Court in

⁸⁸ Transcript of Proceedings, *Forbes v The Queen* [2010] HCATrans 45 (12 March 2010) 453–7 (D F Jackson QC).

⁸⁹ Transcript of Proceedings, *Forbes v The Queen* [2010] HCATrans 120 (18 May 2010) 2752–3.

Forbes' case fully reprised its *Parker* judgment almost exactly 98 years earlier.⁹⁰ In terms of setbacks to the rational treatment of scientific evidence in courtrooms, French CJ's endorsement of convictions based on 'verbal tags' is even more dramatic than Griffith CJ's declaration of the fact of the individuality of fingerprinting (a claim that, albeit neither 'generally recognised' in 1912 nor empirically supported in 2010, at least had adherents outside of a single laboratory.) A possible upside of the High Court's remarks is that they will alert defence counsel to the dangers of agreeing to such terminology in future trials. The more likely downside is that the remarks will also alert prosecutors to the benefits of offering bargains that less alert defence counsel may find impossible to refuse. Perhaps worst of all, the Court's reasons will inevitably be interpreted by forensic experts themselves as giving judicial imprimatur to the injection of qualitative labels into all of their future evidence, presenting a much easier alternative than bringing their statistical calculations up to a proper scientific standard.

This unwelcome new Australian DNA debacle has one saving grace. As will be detailed next, we need not worry that Ben Forbes is another Farah Jama.

C Outside the Courtroom

(a) Ben Forbes and the Bike Path

The 17-year-old was walking on the bike path behind Lyneham High School when she felt a knife blade on her neck. She briefly thought it was her boyfriend, but then realised the truth. 'Shush', the man said as he led her to the bushes. But she didn't obey, 'What's your name?' she asked, and, thinking he was her age, 'what school do you go to?' He told her he was Michael, named his school and then demanded oral sex. Fortunately, at that moment, her phone rang. 'Michael' told her not to answer, but she ignored him and told her boyfriend to come straight to Lyneham High. This gambit left her with a bruised face and minus her phone but, unlike the other 17-year-old from three months earlier, she wasn't raped. In a way, her attacker was lucky too, as he didn't leave his DNA behind.⁹¹ The bad news for Ben Forbes was that, four weeks later, the teenager picked him out of a photo line-up.⁹²

⁹⁰ Parker's special leave application was rejected on 23 May 1912; Forbes' on 18 May 2010.

⁹¹ *R v Forbes* (2009) 4 ACTLR 1, 4–5 [11]–[13].

⁹² *Ibid* [17].

Forbes' trial judge, Gray J, initially refused to sever his joint indictment for both attacks.⁹³ However, a month later, the High Court delivered its first ruling on the similar fact rule in 11 years, holding that a teenager facing separate allegations of rape by six separate complainants should get six separate trials, on the ground that the cases were irrelevant to one another as the sole issue was whether each complainant consented.⁹⁴ This ruling was unfortunate both in terms of outcome—the same teenager ended up pleading guilty to two rapes committed just months *after* the High Court freed him⁹⁵ — and in language, with the Court characterising the behaviour alleged by the complainants as 'entirely unremarkable'.⁹⁶ But it prompted Gray J to reverse his earlier ruling because knife-wielding rapists who demand oral sex from teenagers on bike paths aren't rare either.⁹⁷ Indeed, there had been three other violent attacks on the same stretch of bike path in the previous nine months.⁹⁸

After a jury convicted Forbes of the first rape, he opted to be tried by Gray J alone for the second one. Delivering his verdict in early 2009, the judge held that he was deeply impressed by the complainant's self-possession at the time of the attack and considered her a reliable witness. Conversely, Forbes was not a 'particularly convincing witness' and his alibi evidence—this time not just his wife, but also his visiting sister-in-law and her fiancé—was riddled with discrepancies. However, as Gray J correctly observed, the only evidence against Forbes was the complainant's identification of him from a photo-board. Although Gray J had dismissed an objection to the board's admissibility based on the range of ages of the eight subjects of the photo-board, he heeded a defence expert on the dangers of misidentification. Dr Richard Kemp from the University of New South Wales' School of Psychology highlighted the dark and traumatic crime scene, the four weeks between crime and identification, her impression that the attacker was in her

⁹³ *R v Forbes* [2006] ACTSC 47 (18 May 2006) [2].

⁹⁴ *Phillips v The Queen* (2006) 225 CLR 303.

⁹⁵ Paula Doneman, 'Sex Attack Spree Ends in Jail at Last', *The Sunday Mail*, 30 September 2007, 49; *R v Phillips* (Unreported, District Court of Queensland, Judge Shanahan, 17 September 2007), noting that the last offence was 'somewhat similar' to one of the charges in respect of which the High Court ordered separate trials.

⁹⁶ *Phillips v The Queen* (2006) 225 CLR 303, 321. See criticism by Jeremy Gans, 'Similar Facts After *Phillips*' (2006) 30 *Criminal Law Journal* 4, 224; David Hamer, 'Similar Fact Reasoning in *Phillips*: Artificial, Disjointed and Pernicious' (2007) 30 *University of New South Wales Law Journal* 3, 609; *WA v Osborne* [2007] WASCA 183 (5 September 2007) [27]–[36] (Wheeler JA, Miller JA agreeing). The High Court recently affirmed *Phillips* in *Stubley v Western Australia* (2011) 275 ALR 451.

⁹⁷ *R v Forbes* [2006] ACTSC 47 [13]–[14].

⁹⁸ *Ibid* [16]–[17]. Gray J noted that: 'The general description of the offender was similar in each case. One involved threats with an uncapped syringe, one with a knife and the third offered violence, knocking the victim from her bicycle'. Justice Gray was informed that '[a]t least as far as one of the other incidents in the particular area is concerned... the prosecution does not exclude the accused as a suspect'. (At [17].)

peer group and, most importantly, the Canberra police's failure to ask the witness to make a decision about each photo in sequence. As a result, the 'evidence of identification was not so overwhelmingly strong' for Gray J to reject the alibi witnesses, despite his qualms about their evidence.⁹⁹

Whatever doubts one might have about Forbes's innocence of this alleged attack, the decision to acquit him was a good one. As the University of Warwick's Andrew Roberts argued, the judge's reliance on external expertise on misidentification and his resulting caution in an identification-only case are best practice in the context of a court system whose practices are often mediocre.¹⁰⁰ Equally impressive was Gray J's obvious ability to put Forbes' conviction for the other bike path rape out of his mind. Whatever the merits of the High Court judgment it relied upon, the ruling that the two bike path allegations were not cross-admissible avoided the risk that the court might draw on potentially unsafe tendency reasoning to bolster potentially unreliable identification evidence.¹⁰¹

However, Gray J's application of the High Court's evidence jurisprudence at the 2006 severance hearing had a further outcome that was highly unfortunate for Forbes's other DNA-only, trial in 2007. The 'coincidence notice' entered at the severance hearing pursuant to the uniform evidence legislation covered not only the rape at the bike path in early March 2005 and the attempted rape three months later, but also evidence that Forbes had:

[b]een located and arrested by police on 21 June 2005 in the vicinity of the bikepath which runs from Goodwin Street, Lyneham to the footbridge crossing over Sullivan's Creek, Lyneham in the night time.¹⁰²

Unlike the other two events in the coincidence notice, Forbes conceded that he was the person arrested at the bike path, although he insisted that this was the first and last time he had ever been at that location. It was this event that led to Forbes being buccal-swabbed, in turn leading to his link to the March rape.

This admitted link between Forbes and the bike path went completely unmentioned in his intermediate appeal. In the High Court, it received attention only from Bell J, immediately following her characterisation of the weakness of the prosecution case against Forbes:

⁹⁹ *R v Forbes* (2009) 4 ACTLR 1, 5 [15]–[16], 9–12 [41]–[58].

¹⁰⁰ Andrew Roberts, 'Eyewitness Identification and Expert Insight: *R v Forbes*' (2010) 14 *International Journal of Evidence & Proof* 57.

¹⁰¹ That being said, the exclusion of the other case carries a cost, because it either excludes or sidelines the significance of the police's likely knowledge of Forbes's DNA link to the rape at the time of the photo-board identification in relation to the alleged rape. Not all contamination by DNA is biological.

¹⁰² *R v Forbes* [2006] ACTSC 47 (18 May 2006) [8].

BELL J: That matter that I am raising with you is simply that the evidence, insofar as it went of relative rarity, fell short of enabling a jury to conclude identity beyond reasonable doubt, absent any other circumstance. Although it is to be noted that one circumstance was that he contributed the DNA sample on an occasion when he was present in Lyneham and Lyneham was the scene of the offence. So I suppose that might figure in the jury's approach to the evidence.

MR HASTINGS: Yes. Although I did not see any great reliance upon that circumstance in the way the case was conducted.¹⁰³

Later, she asked the prosecution about whether the agreement between the lawyers on the DNA evidence included concealing the incident on 21 June from the jury:

BELL J: Can I take up in terms of the agreement ... there was an agreed form of putting to the jury the circumstances in which the sample was provided, which itself might have forensic significance.

MR WALKER: Yes. ... Your Honours will be aware that there are, from time to time, areas—sometimes they result from the application of public interest immunity for certain surveillance and other investigative techniques. Sometimes they arise because of the—how shall I call it—involvement of the accused with the forces of law and order for other than the charge in question, where matters that still have to be proved to the court concerning the provenance of evidence are the subject of artificial statements.¹⁰⁴

Despite the unlikely suggestion of an application of the law on public interest immunity, it is clear that the evidence of events in 21 June was excluded because of concern that it might turn Forbes's jury against him. In particular, the prosecution may have thought that the evidence excluded by Gray J's severance decision, where he noted that the bike path arrest was not a 'related event' under the evidence legislation's 'coincidence rule'.¹⁰⁵

¹⁰³ Transcript of Proceedings, *Forbes v The Queen* [2010] HCATrans 120 (18 May 2010) 767–76.

¹⁰⁴ *Ibid* 2561–87.

¹⁰⁵ *R v Forbes* [2006] ACTSC 47(18 May 2006) [9]. At the time, s 98 of the *Evidence Act 1995* (Cth) was affected by exceedingly poor drafting. While a literal reading of the section would be that an unrelated event was exempt from the exclusionary rule, a purposive approach would suggest that an unrelated event offered on the basis of 'the improbability of the events occurring coincidentally' would be inadmissible. The section has since been redrafted to remove reference to the term 'related event' altogether.

However, as Bell J (the lone person involved in the case to vocalise this) clearly recognised, the bike path arrest casts the ‘1 in a million’ random match probability evidence in Forbes’ rape trial in an entirely new light. On its own, the random match probability allowed Forbes to argue that the rapist was someone else and that Forbes just happened to be one of the two or three (or whatever) others with a similar enough profile within cooee of Canberra. However, once the events of 22 June are taken into account, Forbes’s argument is dramatically weaker. His innocent explanation requires him to claim that that he was a victim of a double coincidence: that he was not only one of a handful of people within 1000 kilometres who shared a rapist’s DNA profile, but that he also happened innocently to visit the exact crime scene at night for the first time in his life just months, or even weeks, after the real rapist.

Of course, this argument would not go anywhere if Forbes’ visit to the bike path had been no different to the thousands of regular uses of the bike path by local Canberrans. But Gray J’s discussion of Forbes’ credibility in the attempted rape trial reveals that this was not the case:

He says that his reason for being in the area was that he was returning from visiting his sister in the adjoining suburb of Braddon, that he was ‘flashed’ by a police vehicle and, being an unlicensed driver, he turned off the main road he was on and fled his vehicle. That took him into the area that the police had under surveillance.¹⁰⁶

So Forbes not only made his sole admitted visit to the bike path within weeks of one of the crimes alleged against him, but he was an unusual bike path user indeed, as he was not using the path to walk or ride between two locations and actually had his car parked nearby. Understandably, Gray was very dubious about his explanation for being there.¹⁰⁷ As, it seems clear, were the police, who presumably were watching the bike path precisely so that they could catch whoever was responsible for the recent spate of attacks.

All this suggests that Forbes’s conviction for the bike path rape and the upholding of that conviction on appeal was fortunate from the point of view of possible future victims of the bike path rapist. But the exclusion of the evidence of how the police came to acquire Forbes’s DNA and in turn link him to the DNA on the complainant’s clothing meant that the jury and appeal courts (and, for that matter, media commentators expecting a landmark DNA judgment) were presented with an entirely misleading account of the reason he came to be

¹⁰⁶ *R v Forbes* (2009) 4 ACTLR 1, 11 [49].

¹⁰⁷ *Ibid* 11 [50]: ‘I have significant reservations about the reason that he gives for being in the area on 21 June 2005. However, these reservations do not provide any confirmation of the prosecution case.’

suspected and charged with the rape. And it may also mean that the High Court's ruling that the matter was not a 'suitable case' to resolve fundamental questions of forensic science had nothing at all to do with the unproven and specious expert testimony expressly endorsed in the Court's reasons.

(b) Ed Parker and the Warehouses

So who was Ed Parker? And, as readers may have wondered, how did the police know to search his house and fingerprint him after the burglary at Webster & Cohen's?

Apparently, the answer to the first question is: not Ed Parker. A month before the High Court dismissed special leave, Parker was sentenced for the jewellery heist.¹⁰⁸ At the hearing, Detective Howard told the Court that Parker was actually Patrick Hine, a convicted robber who had escaped from a Western Australian jailhouse 16 years earlier.¹⁰⁹ Identifying recidivists in a mobile world was fingerprinting's early *raison d'être*, but Hine decamped too quickly to be printed or photographed; instead, Howard admitted that he was relying on information from someone 'not in prison now'. Parker didn't deny the link, instead stating that he couldn't remember events that far back, but he admitted having been in and out of Victorian prisons in recent years. Howard told the Court that Parker had been known to the Victorian police for a decade since being convicted of breaking into a store in 1903. Judge Johnston was sceptical of Parker's claim that he now earned most of his money on the racecourses. He was sentenced to seven years in prison, followed by detention in a reformatory prison at the Governor's pleasure.

As for the second question, the police did not just *suspect* that Parker's prints would match the ginger beer bottle. Rather, they already knew it would match his left middle finger. Parker's full prints, one of the 29 000 sets in Potter's file (courtesy of his recent stay in Pentridge) was matched to the bottle prior to his arrest and, indeed, was the basis of the arrest warrant.¹¹⁰ Given that the police raided Parker's North Melbourne house the morning after the burglary was discovered, his file must have been one of no more than a few that Potter compared to the bottle before finding a match. Potter explained to the sentencing court that he had had his eye on Parker, as he had found prints that

¹⁰⁸ 'Finger-Print Conviction: Clever Criminal's Record: Seven Years' Imprisonment', *The Argus* (Melbourne), 29 April 1912, 6.

¹⁰⁹ 'Gaul-Breaking at Coolgardie: Escape of Three Men', *The Western Mail* (Perth), 25 September 1896, 37. The article names Patrick Harding as the escapee robber.

¹¹⁰ 'Finger Prints: Convict Warehouse Thief: Sydney Expert Called', above n 5,

matched Parker's at two other warehouse burglaries that had been perpetrated in recent years:

Judge Johnston – “What happened?”

Detective Potter – No action was taken by the police as finger-print evidence alone was not, at both times, regarded as sufficient to warrant it.¹¹¹

Parker said this was all news to him. However, Howard testified that Parker had, since leaving prison, been associated with John Jackson, a ‘reputed safe-breaker’.¹¹² Jackson was arrested for the Webster & Cohen's theft at the same time as Parker, with the raid yielding burglary equipment and guns in both of their houses as well as jewellery (not alleged to be from the Webster & Cohen's safe) in Parker's house.¹¹³ While Jackson was not charged with that burglary, Howard soon arrested him for a different warehouse jewellery burglary on the basis of a fingerprint match,¹¹⁴ however, a jury later acquitted him.¹¹⁵

It follows that Parker's fingerprint match was no ‘cold hit’. Rather, he was very much a usual suspect. In one respect, this casts doubt on the match that convicted him of the jewellery heist, as Potter (like most fingerprinters of his time, and many today) was by no means unbiased when he claimed to have found the nine points of similarity between the two photos. However, if Potter's claims about the other warehouse matches are to be believed, then the chance of Parker being the victim of a mistaken fingerprint identification are reduced. While the jewellery heist and the other two hits may, of course, have been committed by Parker's fingerprint doppelganger, his match to two other (presumably quite different) latent prints makes that coincidence far less likely. Indeed if (as is probable) the matches were to different fingers than Parker's middle left one, then he would have to be the victim of something close to a triple coincidence.¹¹⁶ Given the poor

¹¹¹ ‘Finger-Print Conviction: Clever Criminal's Record’, above n 105, 6.

¹¹² ‘Tell-Tale-Finger Prints: A Burglar Sentenced’, *The Advertiser* (Adelaide), 29 April 1912, 10. Jackson, like Parker, claimed to be a ‘professional punter’: ‘Raid on Jeweller's Shop: Two Men Arrested’, *The Argus* (Melbourne), 7 February 1912, 12.

¹¹³ ‘Raid on Jeweller's Shop: Two Men Arrested’, above n 109, 12.

¹¹⁴ ‘Finger-Prints as Evidence: Interesting Victorian Case’, above n 4, 11. The arrest actually occurred while Jackson was observing Parker's committal hearing.

¹¹⁵ ‘Finger-Print Evidence: John Jackson Acquitted’, *The Argus* (Melbourne), 11 May 1912, 17. (Unfortunately, the available text of this article is illegible.) Three years later, Jackson was wounded in a shoot-out with a police constable: ‘Trades Hall Affray: Shooting of Constable McGrath: Two Bullets Recovered’, *The Argus* (Melbourne), 4 October 1915, 11. Curiously, the gun he used was identified as being the very one seized from Ed Parker's house when he was arrested for the jewellery heist. The article gave Parker's name as Patrick Hogarty.

¹¹⁶ The extent of the coincidence depends, in part, on whether different prints on a person's fingers are independent of each other, as well as the final details of what Parker was matched to and by whom. If the warehouse burglary Jackson was arrested

state of fingerprinting research, even today, we cannot put a figure on the likelihood of such a coincidence. But it is clearly a good deal less likely than the hypothesis of innocence in the single-print case that the High Court considered (or, at least, said it was considering) in *Parker v The King*.

D Conclusion

What little difference a century makes. In two cases raising almost identical questions, the High Court:

- refused to hear appeals raising historic challenges to the ascendant forensic science of the day;
- cited controversial and dubious empirical claims that were not in evidence before it;
- endorsed juries relying on even more controversial claims that were, and remain, unsupported and dangerous; and
- made these rulings knowing that significant evidence supportive of the defendant's guilt had been kept from the jury.

In terms of substance, it was the best of times; justice was almost certainly done to both Parker and Forbes. But in terms of process, it was the worst of times, with both incarnations of the High Court relying on evidence that was not properly on the record.

Presumably both versions of the Court were frustrated by the gaps in the evidence that went to the jury. However in each instance the Court opted publicly to rely on unfounded empirical claims misleadingly bolstering forensic science, while preserving the lie that either matter was truly based solely on a single piece of forensic evidence. In doing so, the High Court demonstrated its institutional infirmities when it comes to guiding Australia's courts on how to assess bold scientific claims presented by police witnesses in criminal trials.

for was the same as one of the ones Parker was linked to, then that would be a (much less significant, admittedly) fourth coincidence.