THE HON T F BATHURST AC

CHIEF JUSTICE OF NEW SOUTH WALES

SIR MAURICE BYERS LECTURE 2021

'MODERN AND FUTURE JUDGING'

WEDNESDAY 3 NOVEMBER 2021[*]

INTRODUCTION

1.   I would like to begin by acknowledging the traditional owners of the land on which we meet, the Gadigal people of the Eora Nation, and pay my respects to their Elders past, present and emerging.

2.   It is a great honour to present the 2021 Sir Maurice Byers Lecture. As a legal mind, Sir Maurice was unparalleled. Even in unfamiliar areas of law, he had a remarkable propensity for being right. What's more, he was a terrific mentor.

3.   Sir Maurice was known to get straight to the heart of an issue. His legal opinions were invariably clear and succinct.[1] Many lawyers and, dare I say it, judges would do well to take a leaf out of his book.

4.   That said, perhaps you think my topic tonight – "Modern and Future Judging" – is unusual, since Sir Maurice's legacy is as an advocate rather than a judge. However, Sir Maurice recognised that both lawyers and judges participate in the administration of justice, although with different functions.[2]   And to quote Sir Gerard Brennan, Sir Maurice's "participation in the work of [the High] Court was perhaps no less on that side of the Bar table than it would have been on this."[3] The meaning of "modern judging" is relevant to judges and practitioners alike as they share an inherently symbiotic relationship.

---

[*] I express my thanks to my Research Director, Ms Rosie Davidson, for her assistance in the preparation of this address.

[1] And "most importantly helpful", to quote Anne Twomey, Sir Maurice Byers Lecture 2020: 'Maurice Byers – Legal Advice in the Constitutional Maelstrom of the Whitlam Era' [2020] (Summer) *Bar News* 42.

[2] Sir Maurice Byers, '"A Living National Treasure": Speech Given at the Bench and Bar Dinner on 17 June 1994' in Nye Perram and Rachel Pepper (eds), *The Byers Lectures: 2000-2012* (The Federation Press, 2012) 292, 295.

[3] Retirement of Chief Justice Sir Gerard Brennan, 21 May 1998, (1999) 193 CLR v, vi.

'MODERN AND FUTURE JUDGING' – WHAT IS IT?

5.   What do I mean by "modern and future judging"?

6.   I should first acknowledge the perils of calling anything "modern". Quite simply, it often does not age well. In five or ten years' time someone may read this lecture smugly, knowing that my words are now quite passé. What is modern is relative; today's "common and obvious" was not so in the past, nor will be in the future.[4]

7.   I should also acknowledge that "judging" occurs at courts of all levels, from the local to the High. In fact, the vast bulk of judging work is done in local and district courts. I will try to speak about judging in a way which encapsulates its diversity, but please forgive me if I at times place undue weight on my own experience.

8.   What then is judging?   My foundational proposition is that no matter the era, the fundamentals remain the same. A judge's function is to settle controversies between parties, by references to the facts and applicable law.[5] Of course, a judge's function is broader than this: in deciding cases, judges (consciously or otherwise) lay down norms of conduct which promote social cohesion and good governance.[6]

9.   When speaking of the qualities we seek in a judicial officer, the aptly-named Lord Judge has stated that the "eternal verities do not change."[7] I could quibble with the technical accuracy of imputing perpetual qualities to judges throughout all time and space. But as I said, I do think there are judging "fundamentals", at least in our legal system. The most obvious include impartiality, independence, fairness, knowledge and understanding of the law, and ability to understand and decide cases.[8] I want to keep

---

[4] Lord Judge, 'Reflections of a Retired Lord Chief Justice' in Jeremy Cooper (ed), *Being a Judge in the Modern World* (Oxford University Press, 2017) 13, 17.

[5] See the definition in *Fencott v Muller* (1983) 152 CLR 570, 608: "The unique and essential function of the judicial power is the quelling of such controversies by ascertainment of the facts, by application of the law and by exercise, where appropriate, of judicial discretion."

[6] See Joe McIntyre, 'Re-examining the Judicial Function in Australia' in Gabrielle Appleby and Andrew Lynch (eds), *The Judge, the Judiciary and the Court: Individual, Collegial and Institutional Judicial Dynamics in Australia* (Cambridge University Press, 2021) 22. See also Tania Sourdin, *Judges, Technology and Artificial Intelligence* (Edward Elgar Publishing, 2021) 32; Tania Sourdin, 'Judge v Robot? Artificial Intelligence and Judicial Decision-Making' (2018) 41(4) *UNSW Law Journal* 1114, 1124, 1133 ('Judge v Robot').

[7] Lord Judge (n 4) 20-22.

[8] There are various iterations of what the 'core' values of the judicial function are. See, eg, U.N. Office on Drugs and Crime (UNODC), *Bangalore Principles of Judicial Conduct* (2002), <https://www.unodc.org/pdf/crime/corruption/judicial_group/Bangalore_principles.pdf>.

these intrinsic characteristics of judging in mind as we think about challenges in modern and future judging as these things will, or should, persist.

10. Eternal verities aside, judging does not occur within a vacuum. Judges must respond to what economists would call "externalities". One example is how judges treat First Nations offenders. This takes place in a context where there is increasing awareness of the effects of social disadvantage, and the past and present inadequacy of the criminal justice system to deal with those problems.

11. Further, judges deal constantly with change and increasing complexity, despite a reputation for being set in our ways. Society changes, technologies change, legal principles change, factual matters change – and judges must respond. For example, when Sir Maurice retired the whole of the Corporations legislation was contained in one relatively slim volume, as was the *Income Tax Assessment Act*. We now have Corporations legislation so heavy my tipstaff needs a truck to get it into court. There's a second truck available for all the Income Tax tomes. This is because the drafters of the legislation have attempted to cover every conceivable factual situation. But this shows that in two isolated fields of law, a judge has to understand and deal with myriad factual situations with specific technical issues, quite apart from knowing the basic principles. Fortunately, it's not part of a judge's role to have an encyclopaedic knowledge of every legal principle in existence. If you think this, you've been successfully hoodwinked. What is critical is that the judge can understand and evaluate arguments put in respect of those issues.

SAUSAGE MACHINES AND SUBTITLES

12. I was somewhat inclined to subtitle this lecture, "staring into the sausage machine", but that first needs an explanation. In their book, *Artificial Intelligence, Robots and the Law*, Michael Guihot and Lyria Bennett Moses conclude their discussion with this astute comment:

> "It has been said that laws and sausages are two things that you do not want to see being made. In this period of technological upheaval in which technologies such as AI and robotics cause disruption, threats and risks, we are asked to stare deeply into the sausage machine. In doing so, we cannot

ignore the social consequences of broad adoption of AI and robots in all their manifestations."[9]

13. Current challenges mean that judges must be alert and realise that with the role comes active responsibility. I am not speaking of judicial activism, but of judicial leadership. That's not to say that judges should enter into the political arena. But they should be astute to how difficulties in existing law can affect the courts and the community, and how changes in community values may make existing laws otiose or inapplicable. What judges must do is to "stare into the sausage machine" of change, to pay full attention and to not simply respond to, but be involved in, the trajectory of change and the conversation around it.

COVID-19, COURTS AND CHANGE

14. Somewhat predictably, I want to talk about this and last year's most hackneyed subject – the pandemic, and what it means for judging.

15. On a preliminary note, I read with interest this comment by Gabrielle Appleby and Heather Roberts:

> "Technological developments pose a particular challenge for chief justices for a number of reasons… [C]hief justices may not necessarily understand the opportunities and threats that technology poses for traditional court processes".[10]

There may be some truth to this criticism. I am by no means an expert in new technologies or their opportunities and threats. Perhaps that's why it is especially important to have these conversations. From my perspective, the past two years have thrown these issues into sharp relief, as I'm sure many of my fellow judges would agree. In the words of one US judge, the pandemic "was not the disruption we wanted, but it was the disruption we needed."[11]

---

[9] Michael Guihot and Lyria Bennett Moses, *Artificial Intelligence, Robots and the Law* (LexisNexis, 2000) 353 [11.3].

[10] Gabrielle Appleby and Heather Roberts, 'The Chief Justice: Under Relational and Institutional Pressure' in Gabrielle Appleby and Andrew Lynch (eds), *The Judge, the Judiciary and the Court: Individual, Collegial and Institutional Judicial Dynamics in Australia* (Cambridge University Press, 2021) 50, 66.

[11] Sourdin, *Judges, Technology and Artificial Intelligence* (n 6) 99.

Court responses

16. COVID-19 has changed courts throughout the world. In many places a "digital pivot" occurred in a matter of days and weeks.[12] In New South Wales, the Local, District and Supreme Courts adopted a range of measures, including matters proceeding in the "virtual courtroom" via Audio Visual Link (AVL), in the "online court", by telephone, or on the papers.[13] The High Court also conducted video connection hearings,[14] including with judges sitting simultaneously from different cities. These technologies could be classified as "supportive",[15] as they have allowed judges to continue in their traditional day-to-day roles with minimised interruptions.

17. The pandemic has been a clear catalyst for technological changes to court operations and judges' daily work. But it was not the sole impetus. Courts had already been considering and implementing technologies, albeit at a slower pace. The High Court has conducted special leave hearings by AVL for decades.[16] If it were not for existing infrastructure, the NSW Supreme Court would have faced a much greater struggle to continue through the pandemic. Internationally, even before the pandemic, Singapore had been using video hearings in its online civil courts, and the UK had been piloting video hearings.[17] Other jurisdictions including Utah and British Columbia had also been using a range of online court systems, typically for small claims and certain other disputes.[18] But the rate at which the utilisation of such technologies has increased over the past two years has been incredible. All judges have witnessed this to varying extents.

18. I should also note the difference between what I refer to as "virtual courts" and "online courts". Both have human decision makers. Virtual courts use the traditional court format, but all parties appear simultaneously in a virtual space. This is like the AVL system we have used for hearings. Online courts, on the other hand, are not simply an

---

[12] Vicki Waye et al, 'Maximising the Pivot to Online Courts: Digital Transformation, Not Mere Digitisation' (2021) 30(3) *Journal of Judicial Administration* 126, 126.

[13] Michael Legg and Anthony Song, 'The Courts and the Pandemic: the Role and Limits of Technology' (2020) 66 *Law Society Journal* 65, 67.

[14] Sourdin, *Judges, Technology and Artificial Intelligence* (n 6) 39.

[15] Ibid 2, 37.

[16] Michael Kirby, 'COVID-19, Remote Court Hearings, Automated Decision-Making and Access to Justice' (2020) 30(4) *Australasian Dispute Resolution Journal* 256, 258.

[17] Zbynek Loebl, *Designing Online Courts: The Future of Justice is Open to All* (Wolters Kluwer, 2019) 35.

[18] Brian M Barry, *How Judges Judge: Empirical Insights into Judicial Decision-Making* (Informa Law from Routledge, 2021) 274-5.

overlay of traditional court systems, and can include an asynchronous online forum where decisions are made on the papers.[19]   Various courts in NSW have used an online court system since 2016. In the Supreme Court this is used by Registrars in some lists as a case management tool, for making orders and to reduce the number of in-person appearances in preliminary stages.

Have these changes changed "judging"?

19.   An important question is, have these changes changed judging, or who a "modern judge" is? The short answer, I believe, is "no".

20.   Virtual courtroom use has changed some of the ways that parties may perceive a judge. In a physical courtroom a judge sits on a raised bench, but in the virtual court the judge may be shown from a less impressive camera angle. Court architecture is reduced to a quarter of a screen or eliminated entirely. Parties are not in the physical presence of the judge, and in some virtual courts, formalities like the wearing of robes, knocking on or bowing may be dispensed with.[20] It has been argued that "[a]ny dissonance between the image of the judge and the nature of their role potentially detracts from their effectiveness" and perceived legitimacy, and that video links blur boundaries between a judge and parties and make it more difficult for the judge to embody and maintain the authority of the court.[21]

21.   Other commentators warn against eliminating physical courtrooms, because this may undermine respect for the authority of the court.[22] There is genuine wisdom to these arguments. There are also accessibility concerns which favour keeping at least some courts physical, even after COVID concerns have passed and technology is even better.

22.   However, these changes do not undermine the fundamentals of judging. The source of a judge's authority comes substantially from their independence, impartiality and

---

[19] Richard Susskind, *Online Courts and the Future of Justice* (Oxford University Press, 2019) 60, 113, 143; Barry (n 18) 274.

[20] Although, I note this has not generally been the practice in the Supreme Court of New South Wales, which has tended to retain formalities whilst using the virtual court. See for example, *Miles v Amos* [2021] NSWSC 38 [21]. See also the Court's Virtual Courtroom Practitioner's Fact Sheet, which sets out that "All usual court etiquette, protocols, procedures and restrictions apply": <https://www.supremecourt.justice.nsw.gov.au/Documents/Home%20Page/Announcements/Fact%20 Sheet%20-%20Practitioners.pdf>.

[21] Emma Rowden and Anne Wallace, 'Remote Judging: The Impact of Video Links on the Image and the Role of the Judge' (2018) 14(4) *International Journal of Law in Context* 504, 505-6, 514, 516. See also *Miles v Amos* [2021] NSWSC 38 [24].

[22] Sourdin, *Judges, Technology and Artificial Intelligence* (n 6) 105-6.

command of the law, not simply how they are visualised. Even if the symbolic majesty of the judge as a proxy for the judicial institution wanes somewhat over AVL, "majesty" is not a fundamental judicial characteristic. Such shifts are more cosmetic and don't impact a judge's impartiality, independence, knowledge of law or ability to decide. I should note that there may be exceptions, for example where the credibility of a witness is essential to a case and can't properly be assessed over video. In such circumstances, it may be that virtual limitations prevent a judge from assessing the facts adequately. However, this must also be doubted having regard to improvements in technology in recent years, and increasing recognition of the challenges for judges assessing the credibility of witnesses by "demeanour" and so forth, even in a physical setting.

23. But with the hindsight of having now experienced a fully virtual court system, the differences have not meant an abdication of some parts of the judicial function or authority. Michael Kirby has stated that "AVL hearings are not necessarily a major change from the present way that courts are operating. They are no more than a supplementary facility that leaves the basic character of the judiciary and court proceedings untouched."[23] Further, other formal cues can distinguish the judge and their authority on a video link, such as through use of backgrounds or digital spotlighting.[24] In any event, formalities already differ between jurisdictions and courts. For example, judges wear a wig when sitting in the NSW Court of Criminal Appeal, but not in the Court of Appeal. And those who have been in a range of courtrooms would agree that not all courts are necessarily majestic.[25]

24. An online court brings other considerations, including because what constitutes an "online court" varies depending on where you are.[26] To the extent that such forums are used essentially for preliminary case management or simple claims, I can't see much impact to core judicial functions. There are more thorny issues here in relation to criminal matters and more substantive adjudication, but this is too broad for me to go into now.

---

[23] Kirby (n 16) 264.

[24] Rowden and Wallace (n 21) 516.

[25] Susskind (n 19) 208.

[26] Further, there is also a lack of clarity in the language used to describe such technologies. Terms such as Online Courts, Electronic Dispute Resolution, ODR, Internet Dispute Resolution and Online Alternative Dispute Resolution have been used interchangeably: Waye et al (n 12) 134.

How should judges respond?

25.   What does this mean for judging now and into the future?

26.   First, the modern judge must engage and grapple with the use of technology in the courts.

27.   A key reason that judges must not be neo-luddites is because of the community that they serve. Judges do not need to be trendy,[27] but we cannot remain passively in a system designed for a different epoch[28] without regard for the needs of society. We live in an increasingly digital landscape in which much of our "daily activity is enabled and augmented by the internet and advanced technologies".[29] In fact, Richard Susskind has identified that "[m]ore people in the world now have access to the internet than access to justice".[30] To quote Lord Justice Ryder:

> "[J]ustice does not stand outside or above the citizen … Citizens, whether litigants or not, are not supplicants coming to the high hand of judgment. They are rights bearers. And our justice system should be capable of ensuring that as such they are able to access those rights in an appropriate setting."[31]

28.   Judicial leadership in this area is particularly important due to these access to justice concerns. Careful consideration is needed which recognises that technology creates barriers for some[32] and breaks them down for others.[33] Grappling with technology should also not overlook that different matters have different needs, especially in the civil/criminal divide, and that a standardised approach may be inappropriate. We must also not overlook that no matter how skilled judges and practitioners become with technology, there will be people who are frightened by it, don't trust it, and can't get used to it. Increasing access to justice shouldn't mean that we further alienate those who might already feel disconnected from the justice system.

---

[27] Lord Judge (n 4) 17.

[28] Susskind (n 19) 42.

[29] Ibid 29.

[30] Ibid 27.

[31] Lord Justice Ryder, 'The Modernization of Access to Justice in Times of Austerity' in Jeremy Cooper (ed), *Being a Judge in the Modern World* (Oxford University Press, 2017) 135, 139.

[32] For example, not everyone has digital access and/or digital ability. Sourdin, *Judges, Technology and Artificial Intelligence* (n 6) 29.

[33] For example, since people may be excluded from a traditional, physical courtroom due to physical or other disabilities (Susskind (n 19) 221) or proximity to a courthouse. There is also the potential for greater cost efficiencies though use of technology.

29. However, wrestling with the issues around technology doesn't mean that judges should rush out and get PhDs in pure mathematics or computer science. Sorry, Justice Leeming. It does mean, though, that judges should learn about the range of technologies available, and how to use them. This may require judicial education which focuses on practical skills.

30. Second, the modern judge should appreciate there may be better ways to resolve disputes than traditional zero-sum litigation. If a judge's key function is to settle controversies, could this also be done by advocating for broader dispute resolution options? Susskind has suggested that access to justice should embrace four different elements: dispute resolution, of course, but also dispute containment, dispute avoidance, and legal health promotion.[34] Judges have an important leadership role in advocating for all types of justice, not merely traditional court-based justice.[35] This may include court-based Online Dispute Resolution systems, restorative justice initiatives and promotion of general legal education.

31. Third, the modern judge should look to the future. As restrictions ease, some of the rapidly implemented changes will be wound back. In fact, Kirby has said it would "be a mistake to exaggerate the importance of introducing AVL technology to the courts."[36] But this does not mean that judges should carry on as before. Instead, I hope there will be space for more nuanced thought about longer term changes, which improve our current court processes. I agree with Lord Justice Ryder that:

> "Digitizing the system is a necessary but, on its own, not sufficient step. If we simply digitized our existing courts and tribunals, and their processes, all we would do is to digitally replicate our existing system… It would embed and continue into the future the systems of the past, and in so doing carry with it the prospect that we would simply carry forward the problems inherent in those systems."[37]

---

[34] Susskind (n 19) 66-70.

[35] As Tania Sourdin has noted, "justice resides outside as well as within courts". Sourdin, *Judges, Technology and Artificial Intelligence* (n 6) 28.

[36] Kirby (n 16) 264.

[37] Lord Justice Ryder (n 31) 142.

32. Rather than just replicating traditional practices virtually as occurred during COVID, the future may involve a blend of physical, virtual and online courts with improved technologies, as well as broader options for dispute resolution outside of the courts. [38]

33. Looking to the future is also important when we think how quickly technology has progressed. In a speech some 27 years ago, Chief Justice Mason said:

> "[J]udges must be kept abreast of advances in technology – they must be computer literate. Technology has altered the way in which courts operate. I must say that, having watched my secretary struggle to come to terms with the new software program which the High Court recently installed, I shall be quite happy to retire before their installation in courtrooms becomes obligatory."[39]

34. Sir Anthony may have retired before being forced to use that software but he was right in recognising how technology is altering courts. If in 27 years things have come so far, one can only imagine how much more important his advice is for judges in the next 27.

CAN ROBOTS BE JUDGES?

35. My next question is: can robots be judges?

36. I'm sure some would be quick to joke that some judges are already robots, so why not robot judges? Normally, I would make a similar joke, but it is simply not true. A hallmark of our judiciary is its ability to think critically and independently.

37. That caveat aside, it is a controversial question indeed whether a robot – or a machine, an algorithm or a computer system – could or should ever take on all or some of the functions of a judge, now or in the future.

What is Artificial Intelligence?

38. When talking about Artificial Intelligence (AI), it is important to remember that AI is an umbrella term.[40] I will speak about a few types of AI but I will barely scratch the surface. It will also not shock you to learn that I am no expert in AI, so please forgive me for any

---

[38] See discussion in Kirby (n 16) 261 (citing Richard Susskind, 'The Future of Courts' (2020) 6(5) *The Practice* 3). See also Waye et al (n 12).

[39] Sir Anthony Mason, 'The Role of the Judge' (Speech, Judicial Orientation Programme, 3 October 1994) 10.

[40] Michael Legg and Felicity Bell, *Artificial Intelligence and the Legal Profession* (Hart Publishing, 2020) 16; Sourdin, 'Judge v Robot' (n 6) 1116.

oversimplifications. However, there is great benefit in having at least a general understanding, as we will all have to engage with these issues more and more.

39. AI, at its simplest, refers to "computers doing the sorts of things that minds can do".[41] There are a number of types of AI relevant to judging. These include Expert Systems, Machine Learning and Natural Language Processing.[42]

40. Expert Systems are "a type of knowledge-based system … [which] seeks to mimic human expertise by combining a knowledge base … and an 'inference engine', which is programmed to manipulate the knowledge base material."[43] They use a type of deductive reasoning through conditional statements to work through legal problems and come to an answer – "if this, then that" type rules, with complex decision trees and flow charts.[44] Expert systems are pre-programmed by humans.[45] Such a program can guide a user by asking specific questions.[46] Expert systems have been referred to as first wave AI.[47]

41. Machine Learning is another thing entirely, referred to as second wave AI.[48] The basic premise here is that the system itself learns from large bodies of data.[49] As the system processes more data, it adapts itself and improves its performance.[50] Rather than a human programmer telling the software which rules to follow, the system "can produce its own computational model and apply it to new and not previously seen data."[51] Machine learning uses "neural networks", inspired by the architecture of the human brain,[52] which are layers of mathematical functions. An input layer of neurons absorb data and pass the information on to further layers of neurons, eventually leading to an

---

[41] Barry (n 18) 276.

[42] Legg and Bell (n 40) 17.

[43] Ibid 20. See also Guihot and Bennett Moses (n 9) 21 [1.50].

[44] Legg and Bell (n 40) 20; Susskind (n 19) 264; Barry (n 18) 276.

[45] Barry (n 18) 276.

[46] Legg and Bell (n 40) 20.

[47] Susskind (n 19) 264; Barry (n 18) 276.

[48] Susskind (n 19) 264; Barry (n 18) 276.

[49] Monika Zalnieriute and Felicity Bell, 'Technology and the Judicial Role' in Gabrielle Appleby and Andrew Lynch (eds), *The Judge, the Judiciary and the Court: Individual, Collegial and Institutional Judicial Dynamics in Australia* (Cambridge University Press, 2021) 116, 123.

[50] Guihot and Bennett Moses (n 9) 22 [1.53]; Legg and Bell (n 40) 28.

[51] Legg and Bell (n 40) 28.

[52] Ibid 30; Barry (n 18) 277.

output layer which predicts a particular outcome.[53] The systems are so complex and opaque that some have said this gives rise to a "black box" problem between the input and output stages, which refers to the difficulty of understanding how AI systems arrive at their conclusions.[54]

42.   Natural Language Processing is a way for machines to recognise and reproduce natural human language.[55] Broadly speaking, it uses statistics to analyse how words relate to other words around it. It involves syntactic and semantic analysis.[56]

What is Judge AI; or, how could AI be used in judging?

43.   It is undeniable that AI has myriad potential applications within the legal system, and even for judges. Tania Sourdin has used the term "Judge AI" to refer to "developments in the various branches of AI specifically concerned with contributing to judicial tasks". This can range from greater use of technology in judicial processes prior to trial, to playing a supportive role in decision-making processes, to replacing a judge altogether.[57]

44.   Some distinctions should be drawn. When thinking about how AI may interact or intersect with judging, there is a considerable difference between the automation of procedural steps and the automation of substantive decisions.[58] There is also a significant difference between fully autonomous decision-making systems, and decision-support systems where the final decision is subject to human control.[59]

45.   Expert system programs have particular application to guide decision-making where legislative rules "lend themselves to step-by-step programming and do not have indeterminate concepts, and where facts are uncontroversial or agreed."[60] Such programs can be used to guide decision-making.

---

[53] Barry (n 18) 277. See also Legg and Bell (n 40) 30-3.

[54] Barry (n 18) 277. See also Dominique Hogan-Doran, 'Computer Says "No": Automation, Algorithms and Artificial Intelligence in Government Decision-Making' (2017) 13(3) *The Judicial Review* 345, 375.

[55] Guihot and Bennett Moses (n 9) 24 [1.59].

[56] Legg and Bell (n 40) 35.

[57] Sourdin, *Judges, Technology and Artificial Intelligence* (n 6) 16.

[58] Ibid 17; Zalnieriute and Bell (n 49) 118.

[59] Guihot and Bennett Moses (n 9) 142 [5.12].

[60] Zalnieriute and Bell (n 49) 123.

46. In terms of machine learning, these systems can be used for classification or prediction, such as the likelihood of a person reoffending,[61] or suggesting a sentencing outcome.[62] Natural Language Processing can be used to analyse texts of decisions and find patterns,[63] or find material relevant to search terms,[64] or for speech to transcript recognition.[65]

47. Guihot and Bennett Moses provide a useful illustration of how AI could be used in a decision-support system. They say, "[i]t may be that the decision is informed by conclusions reached by an expert system (eg, 'John Smith meets the eligibility criteria in section 56(b)(v)(i)') or a machine learning process (eg, 'Jane Jones is unlikely to re-offend')."[66] A human decision maker may use this information to make a further decision.

48. One interesting example in NSW is a Bail Assistant program currently being developed by the Judicial Commission. The purpose of the program is to guide a decision-maker through all the steps to make a bail decision. Those who have had to wrangle the Bail Act know that there are many things a decision maker must turn their mind to, and many conditions – if a particular circumstance applies, then do this, and so forth. The Bail Assistant will be intended as a tool to support the judicial officer from start to finish to assess bail concerns efficiently, make an informed bail decision, and record the decision accurately. It may also be used as an "online court" where parties can make synchronous submissions as the judicial officer steps through the program. Eventually, the Bail Assistant is designed to be a supervised machine learning system, which could use data from past bail decisions to predict probable outcomes and to bring up relevant precedent. Even if it eventually can act as a machine learning system, it is as an assistant only and does not make the decision.

49. But the reality is that AI is already being used by judges around the world, primarily to assist decision-making. For example, the Malaysian judiciary uses an AI system to recommend sentencing decisions for drug possession and rape cases.[67] Mexico has

---

[61] Ibid.

[62] See Nigel Stobbs, Dan Hunter and Mirko Bagaric, 'Can Sentencing Be Enhanced by the Use of Artificial Intelligence?' (2017) 41(5) *Criminal Law Journal* 261, 275.

[63] For example, this has been done for decisions in the European Court of Human Rights. See Sourdin, *Judges, Technology and Artificial Intelligence* (n 6) 13. See also Legg and Bell (n 40) 88.

[64] Sourdin, *Judges, Technology and Artificial Intelligence* (n 6) 139.

[65] Guihot and Bennett Moses 25 [1.60]; Legg and Bell (n 40) 149.

[66] Guihot and Bennett Moses 142 [5.12].

[67] Barry (n 18) 278.

an "Expertius" system which advises whether a party is eligible for a pension.[68] Many Chinese courts employ AI to give judges an "abnormal judgment warning" if their decisions don't match what is expected from the database, and to correct errors.[69] There are also some examples where AI has taken an actual adjudication role for simple cases.[70] This is not without controversy. These developments will only continue, and are likely to have an increasingly profound impact on judging in years to come.[71]

Does judging require self-awareness?

50. Another contentious topic is whether judging inherently needs to be done by a human. Or, does judging require self-awareness? This is particularly pertinent when considering fully autonomous decision-making Judge AI, or where great weight is placed on predictions or suggestions made by supportive Judge AI.

51. One thing that is completely clear is that artificial intelligence is simply that – artificial. AI lacks self-awareness[72] and the ability to exercise independent thought as humans can.

52. This point was recently considered in the Full Federal Court decision of *Pintarich v Deputy Commissioner of Taxation* ('*Pintarich*').[73] In that case, a taxpayer received a computer-generated letter from the ATO, which ostensibly waived some of his tax liability, but which did not reflect the actual intention of the decision-maker.[74] The Court by majority held that the letter was not a "decision" for the purposes of the *Taxation Administration Act 1953* (Cth). This was because the automatically generated letter did not involve "the reaching of a conclusion as a result of a mental process."[75] Justice Kerr in dissent stated that "what was once inconceivable, that a complex decision might be made without any requirement of human mental process is, for better or worse, rapidly becoming unexceptional."[76] While the case relates to administrative, not judicial

---

[68] Ibid.

[69] Ibid; Loebl (n 17) 52.

[70] Barry (n 18) 280.

[71] Sourdin, 'Judge v Robot' (n 6) 1115.

[72] Legg and Bell (n 40) 15.

[73] (2018) 262 FCR 41 ('*Pintarich*').

[74] Ibid [152].

[75] Ibid [143].

[76] Ibid [47].

decision-making,[77] it foreshadows some divergence of views as to whether human self-awareness is required in judging.

53. The majority's conclusion in *Pintarich* raises possible considerations of what Susskind has termed the "AI fallacy". This is "the belief that the only way to develop machines that can perform at the level of human beings is to *copy* the way human beings work."[78] For our purposes, the fallacy is said to be made when people assume that because machines can't think or feel, they can't do the work of judges.[79] Susskind argues that, although today's machines cannot think, work, emote, create, reason, and feel like a human judge, we should instead focus on outcomes.[80] This would involve considering "whether machines can deliver decisions at the standard of human judges or higher, not by replicating the way that judges think and reason but by using their own distinctive capabilities (brute processing power, vast amounts of data, remarkable algorithms)."[81]

54. Susskind makes a very interesting point, which I don't think can be completely disregarded. Further, AI judging has some superficial compatibility with the core of judging. A machine appears independent: it doesn't fear demotion or crave promotion; it has no political leanings; it isn't concerned about budget cuts. A machine appears impartial: it weighs up the data before it with ruthless dispassion and is unaffected by emotion. A machine is constrained by the law and the facts before it, and faces no internal struggle about which way to decide. But as I have said, the compatibility with the judicial function is only superficial.

55. Susskind's argument conceptualises the outcome as all-important. However, I simply cannot agree that the *how* of judging is not essential. Judging is not done in a vacuum but within a legal system which sits within a society. Our society is neither neat nor two-dimensional, and changes with the passing of time. Our common law adversarial system also has its own quirks which must also be engaged with. Furthermore, it is erroneous to think of the justice system as a service provider for dispute resolution. Rather, the independent judiciary works to ensure that the representative institutions of government,

---

[77] Zalnieriute and Bell have stated that "[a]rguably the same logic should apply to judicial decision-making to make it compatible with the judicial values of transparency, accountability, independence, impartiality, diversity and efficiency." Zalnieriute and Bell (n 49) 141.

[78] Susskind (n 19) 272-4.

[79] Ibid 279-80.

[80] Ibid.

[81] Ibid 280.

not only citizens, act within the law.[82] Within this broader context, judging is also moral and emotional, discretionary, responsive to uncertainty, and inherently creative.

Judging as moral and emotional

56. First, judging can be moral and emotional.

57. Since machines are not self-aware, they do not pause to ask philosophical questions.[83] And AI can "be programmed to know what the law is, but not *why* it is what it is".[84] However, judges are faced with moral questions every day, even if not overtly. In criminal law, for example, judges make decisions which involve constraints on individual liberty.[85] Judges also have the capacity to consider the social impact of decisions,[86] and reasoning may involve policy choices about what is fair.[87] Yet there is a danger that algorithms may objectify individuals as merely their traits, and threaten or devalue human dignity.[88] This is not just an issue for fully automated decision-making, but also for supportive AI which may make predictions or suggestions about what an outcome should be.

58. Judging also can be emotional work. The conventional image of a judge is impersonal and dispassionate,[89] yet judges work in emotionally charged environments. With some hesitation, on balance I think that recognising and utilising the emotional aspect of the judging process can be helpful. A judge must not get caught up in emotion to the exclusion of proper legal principle, but emotion and impartiality are not mutually exclusive. It may be that experiencing the emotions inherent in a case helps a judge to

---

[82] Lord Thomas of Cwmgiedd, 'The Centrality of Justice: Its Contribution to Society and Its Delivery' in Jeremy Cooper (ed), *Being a Judge in the Modern World* (Oxford University Press, 2017) 149, 151-2.

[83] Guihot and Bennett Moses have said that, when dealing with AI, "Goals need to be precisely defined because computers execute commands without pausing to ask philosophical questions. In other words, AI complies with the letter, and not the spirit, of its code." Guihot and Bennett Moses (n 9) 84 [2.74].

[84] Legg and Bell (n 40) 286.

[85] Zalnieriute and Bell (n 49) 141.

[86] Sourdin, 'Judge v Robot' (n 6) 1123.

[87] Don Farrands, 'Artificial Intelligence and Litigation – Future Possibilities' (2020) 9(1) *Journal of Civil Litigation and Practice* 7, 21.

[88] Sourdin, *Judges, Technology and Artificial Intelligence* (n 6) 49, quoting Margot E Kaminski, 'Binary Governance: Lessons from the GDPR's Approach to Algorithmic Accountability' (2019) 92 *Southern California Law Review* 1529, 1542. See also Meena Hanna, '"Robo-Judge": Common Law Theory and the Artificially Intelligent Judiciary' (2019) 29(1) *Journal of Judicial Administration* 22, 35.

[89] Sharyn Roach Anleu and Kathy Mack, *Judging and Emotion: A Socio-Legal Analysis* (Routledge, 2021) 2-4.

reflect community expectations, for example, or to strike the correct balance in sentencing.

Judging as discretionary

59.   Judging can also be discretionary, particularly in common law jurisdictions.[90]   The current focus in automation is in areas where judicial choice is limited, such as in strict liability, summary offences not punishable by imprisonment.[91]   Or, to take an example of an undefended winding up summons in insolvency, if you have proof of the debt, the demand, failure to comply with the demand, and service of the summons, an automated decision process could have great benefit.

60.   However, many legal questions have more than one answer or no single correct answer. Judicial officers at all levels, from local to apex courts, make discretionary decisions. But AI as it currently stands cannot meaningfully exercise discretion, in the sense of subjective choice.[92]   Even concepts we might consider to be "objective", such as "reasonableness" or "unconscionability" are normative standards and less determinate than we make them out to be.[93]

61.   To take a recent example, in the case of *ASIC v Kobelt* the High Court split four to three in deciding whether the proprietor of a general store in remote South Australia acted unconscionably in supplying "book-up" credit to Anangu customers.[94]   Even minds differed in our highest court. Any algorithm which sought to determine such a case must also impermissibly determine normative standards which, in any event, vary having regard to context.[95] As Justice Perry has identified, "it is also important to bear in mind the reasons why Parliament may create powers exercisable by reference to discretionary and evaluative factors. They can equip the decision-maker with the means of reaching a decision in the individual case that best achieves the purposes of the power

---

[90] See generally discussion by Meena Hanna, who argues that artificially intelligent judicial reasoning is fundamentally irreconcilable with the common law: Hanna (n 88).

[91] Zalnieriute and Bell (n 49) 117-8.

[92] Guihot and Bennett Moses (n 9) 140 [5.8].

[93] Farrands (n 87) 19-20.

[94] *Australian Securities and Investments Commission v Kobelt* (2019) 267 CLR 1.

[95] Ibid.

in question and best accords with community values and expectations, as well as considerations of fairness and common sense."[96]

Judging as responsive to uncertainty

62. Next, judging is responsive to uncertainty.

63. Law is uncertain in many respects, particularly in the common law tradition. First, law is a language based discipline, which brings with it a gamut of imprecisions and ambiguities.[97] A plain or literal reading of a statute may result in absurdity. Evidence may not possess logical syntax or predictable semantics, and words can mean different things to different people. Second, law is often intentionally general.[98] As Robert Sharpe, a former Court of Appeal judge for Ontario has said, "[g]enerality gives the law its objective, rational and systematic quality. It is what distinguishes the law from the judicial decision applying it. A legal regime that consisted only of rules specific enough to decide every case without interpretation or judgment would be nothing more than a 'wilderness of single instances'."[99] Third, law is constantly changing.[100] In our legal system, case law and legislation is being developed perpetually. Fourth, the factual context in which law is applied is constantly changing.[101] This brings new legal issues, such as potential duty of care for climate change or class actions over deaths in custody. Fifth, legal problems are often "messy", applying both statute and case law, with conflicting evidence, multiple causes of action and complex relief.[102] Even now, there is debate over what to take into account when interpreting contracts.

64. A judge works in this context. I think that there are inherent challenges with automation in such circumstances, particularly where AI programmers rarely have legal experience.[103] Machine learning systems are useful where new data presented is similar

---

[96] Justice Melissa Perry, 'iDecide: Administrative Decision-Making in the Digital World' (2017) 91(1) *Australian Law Journal* 29, 33. See also Farrands (n 87) 8.

[97] Barry (n 18) 286; Robert J Sharpe, *Good Judgment: Making Judicial Decisions* (University of Toronto Press, 2018) 54.

[98] Sharpe (n 97) 53.

[99] Ibid 54.

[100] See also Perry (n 96) 32.

[101] Sharpe (n 97) 53.

[102] Sourdin, *Judges, Technology and Artificial Intelligence* (n 6) 215.

[103] Sourdin, 'Judge v Robot' (n 6) 1127. Moreover, "[j]udicial decision-making is an area of daunting complexity, where highly sophisticated legal expertise merges with cognitive and emotional competence": Giovanni Sartor and Luther Branting, 'Introduction: Judicial Applications of Artificial Intelligence' in Giovanni Sartor and Luther Branting (eds), *Artificial Intelligence in Law* (Springer, 1998) 105, quoted in Hanna (n 88) 27.

to past data.[104]   Some situations with less uncertainties may lend themselves more naturally to AI technologies, perhaps including the Bail Assistant program. But a judge's ability to respond to uncertainty is a key advantage for ensuring that decisions are just and not arbitrary.[105]

65.   As it is, uncertainty in the law often gives rise to "hard" cases, where the outcome is not clear from statute or authority. There may not be an inherently "correct" answer, and in some cases the outcome could go either way. Or, as Professor Julius Stone described, there are "leeways of choice".[106] It is important to note though that in hard cases, a judge is not entitled to simply choose any outcome as they please. If this were so, one could argue that a machine could just as legitimately make a random selection. Instead, the judge must "find a result that best comports with the fabric and texture of the legal rules and principles pertinent to the dispute."[107] In doing so, they should look for a result "that would make the law a more coherent whole."[108] This requires an understanding not only of what the law is, but *why*, which AI cannot be programmed to know.[109]

66.   Dissenting judgments are also a feature of our legal system which apprehend uncertainty in the law, in a way that machine-made decisions cannot. Some dissents can eventually become the law, such as Lord Atkin's judgment in *Liversidge v Anderson*,[110] Chief Justice Mason in the *Australian Assistance Plan Case*[111] or Justice Evatt in *Chester v Waverly Corporation*.[112] Even those which never become mainstream can be significant. They may assist future judges consider new factual scenarios, or even counter-intuitively increase certainty by forcing the majority to present clearer and

---

[104] Sourdin, 'Judge v Robot' (n 6) 1125.

[105] Richard Posner has put it this way: "The judicial mentality would be of little interest if judges did nothing more than apply clear rules of law… to facts that judges and juries determined without bias or preconceptions. Then judges would be well on the road to being superseded by digitized artificial intelligence programs." Richard Posner, *How Judges Think* (Harvard University Press, 2008) 5.

[106] Martin Krygier, 'Julius Stone: Leeways of Choice, Legal Tradition and the Declaratory Theory of Law' (1986) 9(2) *University of New South Wales Law Journal* 26.

[107] Sharpe (n 97) 73.

[108] Ibid 75.

[109] Legg and Bell (n 40) 286.

[110] [1942] AC 206.

[111] *Victoria v Commonwealth* (1975) 134 CLR 338.

[112] *Chester v Council of the Municipality of Waverley* (1939) 62 CLR 1.

stronger arguments[113] and by clarifying what the majority position signifies.[114] The existence of dissent illustrates the law's complexity and subtlety,[115] and that balancing all these factors is not always a straightforward exercise.

Judging as inherently creative

67. Additionally, judging is also inherently creative. I am not speaking here of judicial activism, so you can put down your pitchforks, or alternatively, furl your banners in support. We also should not confuse judicial legislation, which is verboten, with creative adjudication.[116]

68. I hope that this is not a particularly controversial point. After all, the strength of the common law is its ability to evolve and adapt to novel situations. And it does not "evolve" unassisted but through judgments, which are in turn written by judges. (I speak, of course, only for common law systems where precedent is important.)[117] This evolution may be slow and at times lag behind,[118] but it is important. Novel law is intrinsically creative. Judges respond to unseen circumstances and in doing so ensure that the law remains relevant to society and reflects social values.[119] In doing so, judges also respond to creative arguments from lawyers who assist them in carrying out their functions.

69. One of the most well-known examples of judicial creativity can be seen in that most primordial of cases in a law student's arsenal – the old snail-in-a-bottle chestnut, *Donoghue v Stevenson*.[120] This case saw the development of the modern law of negligence and general principles of the duty of care, now so second nature to us.

---

[113] See, eg, Dixon and Evatt JJ's dissent in *R v Federal Court of Bankruptcy; Ex parte Lowenstein* (1938) 59 CLR 556. *See* also commentary in Andrew Lynch, 'Unrequited but Still Great – The Dissent of Justices Dixon and Evatt in *R v Federal Court of Bankruptcy; Ex parte Lowenstein* (1938)' in Andrew Lynch (ed), *Great Australian Dissents* (Cambridge University Press, 2016) 39, 40, 56.

[114] Andrew Lynch, 'Dissent: The Rewards and Risks of Judicial Disagreement in the High Court of Australia' (2003) 27(3) *Melbourne University Law Review* 724, 737.

[115] Sharpe (n 97) 48-9.

[116] M J Detmold, 'The New Constitutional Law' (1994) 16(2) *Sydney Law Review* 228, 228.

[117] I also note Tania Sourdin's comment that "[j]udicial systems that support the ongoing development of the law through the creation of precedent, which necessarily involves both creativity and an understanding of social change, may raise very different issues relating to the application of technology and AI to the judicial role." Sourdin, *Judges, Technology and Artificial Intelligence* (n 6) 34.

[118] Guihot and Bennett Moses (n 9) 112 [4.1]-[4.2].

[119] McIntyre (n 6) 45; Lord Thomas of Cwmgiedd (n 82) 158.

[120] [1932] AC 562.

Similarly, without judicial creativity in response to novel situations, we would not have a principled law of restitution or unjust enrichment.[121]

70.   Maurice Byers of course was the classic example of a lawyer who convinced judges to take a creative approach to deal with a novel situation. *Kable*[122] and the *Tasmanian Dam Case*[123] spring to mind, although there are many others. Keith Mason in his Byers lecture highlighted the *Wik*, *Kable* and *Political Advertising Case* as decisions which "stand as remarkable tributes to [Sir Maurice's] innovative and persuasive advocacy." He further stated that "[t]hey also illustrate legitimate judicial creativity that surfaces from time to time in every age. It is practiced by all leading jurists however much some of them deny its universality or castigate those who admit it."[124]

71.   On the other hand, AI lacks creativity and imagination.[125] And importantly, Judge AI can get stuck in time: it may reflect and reproduce past understandings, and if it relies on past decisions and the law changes, it may produce inaccurate outcomes.[126] It can only look to past data; it cannot create new principled rules. The following observation by Michael Kirby is apposite:

> "The *Mabo v Queensland* decision of the High Court of Australia would never have emerged from an unyielding automated decision-making procedure based on algorithms derived from 150 years of Australian and British court decisions on Aboriginal rights to land. Sometimes it is essential to sever the algorithms and to feed in entirely new legal ideas."[127]

72.   What I am trying to say is this. As we think about AI, and how it should be or will be used by modern and future judges, we cannot forget what judging is. This includes those fundamentals I have identified, as well as some of the *how* of judging. This is not to say that AI, particularly supportive Judge AI, is never appropriate. I really do think there are exciting prospects for programs that help judges and in turn, benefit society. But we must continue to keep our eyes wide open to the challenges.

---

[121] See Lord Thomas of Cwmgiedd (n 82) 154.

[122] *Kable v Director of Public Prosecutions (NSW)* (1996) 189 CLR 51 ('*Kable*').

[123] *Commonwealth v Tasmania* (1983) 158 CLR 1.

[124] Keith Mason, 'What is Wrong with Top-Down Legal Reasoning?' in Nye Perram and Rachel Pepper (eds), *The Byers Lectures: 2000-2012* (The Federation Press, 2012) 69, 69.

[125] Legg and Bell (n 40) 287.

[126] Sourdin, *Judges, Technology and Artificial Intelligence* (n 6) 147.

[127] Kirby (n 16) 267.

DOES TECHNOLOGY REDUCE BIAS?

73.   I want to speak next about bias. You don't have to look far to see that this is a live issue.[128]

74.   In many ways, the antithesis of the fundamentals of judging is judicial bias. Whether real or apprehended, bias has the potential to undermine a judge's independence, impartiality, and proper decision-making, or how these are perceived.

75.   The question then is, can technology reduce bias, whether conscious, unconscious or apprehended? Unfortunately, like all these things the answer is not simple. In a submission to the current ALRC review into federal judicial impartiality, Dr Monika Zalnieriute suggests that any law reform in this area must consider "how the increasing experimentation and proposals to automate judicial decision-making, or elements or it, especially with machine learning tools, can enhance or undermine the legal system and the judiciary as a whole."[129] It is this enhance/undermine duality which makes the answer complex.

76.   On the one hand, I think technology has positive potential to reduce the occurrence or appearance of judicial bias. For example, technology could be used to turn a decision-maker's mind to factors they must or must not take into account, like the Judicial Commission's proposed Bail Assistant program. Electronic case allocation and electronic case management can increase public confidence that court systems are impartial by design.[130]

77.   Further, on its face, technology seems immune from bias. After all, AI cannot exercise independent thought; it merely acts according to algorithms and the data available before it. The general public can be confident that an AI judge isn't getting coffee with the other side's lawyer or is personally prejudiced against a particular gender or race. Neither does it get tired or hungry, or irritated by counsel.

78.   On the other hand, this is to forget that AI is created by humans, and that humans make design choices. For machine learning, this includes decisions about how to collect data,

---

[128] See for example, the recent High Court decision of *Charisteas v Charisteas* [2021] 95 ALJR 824, and the current Australian Law Reform Commission inquiry into federal judicial impartiality: 'Review of Judicial Impartiality', *Australia Law Reform Commission* (Web Page) <https://www.alrc.gov.au/inquiry/review-of-judicial-impartiality/>.

[129] Monika Zalnieriute, 'Technology and the Courts: Artificial Intelligence and Judicial Impartiality', Submission No 3 to Australian Law Reform Commission, *Review of Judicial Impartiality* (4 June 2021) 1-2.

[130] Ibid 2; Zalnieriute and Bell (n 49) 133.

how to define problems, and how to measure features – all of which are potential sources of bias.[131] Bias can also be included within the algorithms themselves inadvertently, and not necessarily due to specific human choices. A commonly cited example is the problems of COMPAS,[132] a US sentencing and bail risk assessment tool.[133] A report was published which found that "black defendants were far more likely than white defendants to be incorrectly judged to be at a higher risk of recidivism, while white defendants were more likely than black defendants to be incorrectly flagged as low risk."[134] The program did not, in fact, collect information about race. However, a risk of discrimination can still exist where there are other variables which act as a proxy for a protected variable like race – such as an offender's postcode.[135] Even if an algorithm is not biased by design, it may rely on data which has the effect of perpetuating societal inequalities, or which is old or non-representative.

79.   Another problem is that AI tends to lack transparency. Much code is protected by intellectual property law or as a trade secret.[136] The COMPAS tool is one such example of proprietary software where the relevant algorithms have not been disclosed.[137] One of my concerns is that in the case of a patent protected program, the cues which might otherwise indicate bias, such as the text of a judgment, a transcript or the general surrounding circumstances may be missing. It may be impossible to understand how the AI is coming to its recommendation.

80.   But imagine that the technical code for a tool like COMPAS *was* made public.[138] The first problem is that most of us cannot read code. But since humans have fundamentally different reasoning processes to machines, it has been argued that even experts might not be able to interpret machine learning results, and that transparency may further reduce over time as machine learning systems become more complex.[139]

---

[131] Legg and Bell (n 40) 84; Guihot and Bennett Moses (n 9) 36 [1.86].

[132] Correctional Offender Management Profiling for Alternative Sanctions.

[133] Legg and Bell (n 40) 226; Sourdin, *Judges, Technology and Artificial Intelligence* (n 6) 72.

[134] Jeff Larson et al, 'How We Analyzed the COMPAS Recidivism Algorithm', *ProPublica* (23 May 2016) <https://www.propublica.org/article/how-we-analyzed-the-compas-recidivism-algorithm>.

[135] Guihot and Bennett Moses (n 9) 150 [5.33].

[136] Ibid 12 [1.29].

[137] Zalnieriute and Bell (n 49) 129, 132.

[138] Ibid 130.

[139] Ibid.

81. But it is also not the role of judges to scrutinise algorithms, and we must be careful in second guessing their outputs. Again, human brains work differently to machines. We have cognitive restrictions in the number of relationships we can process at one time, and may be unaware of various internal biases (such as "anchoring", "framing" and "proximity" effects).[140] That is not to say we should blindly trust AI outputs. What judges must do is make a decision based on the evidence before them. Experts are needed more than ever to assist in this respect, and lawyers will increasingly require an understanding of AI. But these things show that the issues are not simple. Judges need to be alert to these challenges now and into the future, especially since bias and the reasonable apprehension of bias undermine the judicial function.

ARTIFICIAL INTELLIGENCE AND INSTITUTIONAL INTEGRITY

82. Before I wrap up, I hope you will indulge me and allow a slight tangent. As I have been thinking about this topic, and Sir Maurice's legacy, I've wondered whether there is anything to be said for the unique Australian constitutional arrangements in interaction with these issues. Namely, is artificial intelligence compatible with institutional integrity? Could the use of AI, either as a supportive tool or to replace elements of judging, risk impinging on the institutional integrity of courts empowered to exercise federal jurisdiction?

83. Critics much smarter than I will surely point out the many flaws in my thinking, but I think it is nonetheless an interesting question. Consider this speculation rather than the expression of a fixed view.

84. In *Kable*, the High Court accepted one of Sir Maurice's arguments that a State legislature cannot impose functions on a State court which might undermine the court's institutional integrity as a repository of federal jurisdiction under Ch III of the Constitution.

85. In *South Australia v Totani*, Justices Crennan and Bell said:

> "Since *Kable*, it has been said often that to answer the constitutional description of 'courts', in terms of Ch III, a court must satisfy minimum requirements of independence and impartiality. It has also been accepted that 'legislation which

---

[140] Guihot and Bennett Moses (n 9) 149 [5.32]. See also a list of biases which may be present in AI tools in Mark L Shope, 'Lawyer and Judicial Competency in the Era of Artificial Intelligence: Ethical Requirements for Documenting Datasets and Machine Learning Models' (2021) 34(1) *Georgetown Journal of Legal Ethics* 191, 206-10.

requires a court exercising federal jurisdiction to depart to a significant degree from the methods and standards which have characterised judicial activities in the past may be repugnant to Ch III.'"[141]

86. Could AI's assistive functions impair a court's institutional integrity? There may well be constitutional issues with as yet theoretical legislation which requires judges to use assistive AI in decision-making. Let me take a hypothetical assuming such legislation. An AI system is used to suggest an appropriate sentence for an offender. A human judge imposes the suggested sentence. Questions may arise as to whether the judge is truly acting impartially with full consideration or simply rubber stamping the algorithm's decision. This is particularly relevant when considering who owns or develops the AI. If it is developed by the Executive through a government department, could this give "the appearance that the court as an institution was not independent of the executive government of the State"?[142] Or perhaps legislation which allowed an algorithm to make a decision without giving comprehensible reasons, would deny 'an essential and defining characteristic of a court'?[143]

87. I could go on and on with hypotheticals. If AI was eventually used to make some autonomous decisions, would AI be considered a "judge"? And if not, would there be a problem with a non-judge exercising judicial power? Or would its decisions *not* be considered an exercise of judicial power? Who owns the AI?[144] Could a judge exercise judicial power simply by turning on a computer program? Would States need to limit legislation requiring use of AI to courts or non-judicial bodies which do not exercise federal judicial power?[145]

88. Permit me another musing, but one which I think is terribly important. In *Wainohu,* the High Court held that giving reasons for decisions is "a defining characteristic of a court."[146] The duty to give reasons is linked to the right of appeal, but also more broadly is an aspect of the judicial function.[147] By exempting judges from a duty to give reasons,

---

[141] *South Australia v Totani* (2010) 242 CLR 1 [427] (citations omitted).

[142] *Kable* (n 122) 117 (McHugh J).

[143] *Wainohu v New South Wales* (2011) 243 CLR 181 [7] ('*Wainohu*').

[144] Farrands (n 87) 26. For example, would a court own it, the government, or private corporations? And who would have the capability and resources to maintain and improve the AI?

[145] Chris Steytler and Iain Field, 'The "Institutional Integrity" Principle: Where Are We Now, and Where Are We Headed?' (2011) 35(2) *University of Western Australia Law Review* 277, 230; *Fardon v Attorney-General (Qld)* (2004) 223 CLR 575 [40].

[146] *Wainohu* (n 143) [44] (French CJ and Kiefel J).

[147] Ibid [54], [55], [92].

the relevant legislation was incompatible with the Court's institutional integrity and proper discharge of federal judicial functions.[148]

89. Giving reasons is also an expression of the open court principle, which is an essential incident of the judicial function,[149] but AI tools often lack transparency. I query whether there might be other constitutional issues in their use.

90. Let me take a hypothetical. Assume a computer program, used to analyse the probability of a DNA sample match to a particular person. This tool is used to provide evidence against a defendant. Assume the code is patent protected, and the court can't see the model; although, even if it could, it wouldn't understand it. In fact, this is not actually a hypothetical, but a reality. This leaves various questions. How should judges grapple with the transparency challenges? Is the court really "open"? What are the impacts for an appeal process? And fundamentally, would reliance on such tools lessen the community's confidence in courts to perform their judicial function?

91. I suppose that my point again is that there are real issues to grapple with as AI and other assistive technologies becomes more ubiquitous. My concern is that such technologies could impinge upon fundamental things, like a judge's independence or function of deciding controversies or indeed, the ability of a court to function as a court.

92. On another note, it is plain that Sir Maurice's legacy extends far and wide. I wonder whether he ever anticipated just how far that might be.

CONCLUSION

93. How then should I sum all this up? As I said at the beginning of this lecture, as we think about modern and future judging, we should remember what the fundamentals of judging are. As things change around us, these are key to considering how we should change too. In particular, judges need to take an active approach to these issues – passivity is not an option. We can't just appreciate the sausage – we need to understand how the process of making it impacts on our role.

---

[148] Ibid.

[149] Ibid [58].