

Blue Skies Still Ahead: A Retrospective and Prospective Look at Technology in the Legal Professions

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Abstract

There is much speculation out there on the future impact of technology (including artificial intelligence) on the study, practice and administration of law. Much of that speculation is, with respect, hyperbole. This paper argues that the past two decades of technological change has produced greater accessibility and convenience. The next decade will see technology empower ordinary people in the conduct of their legal affairs, a greater uptake of virtual technology, and experimentation with artificial intelligence and predictive technology. Members of the legal professions should not get too worried, however. Provided they approach change with a pro-active mindset and take advantage of new opportunities (in a manner consistent with legal principle), then there will be blue skies ahead.

1 Introduction

Imagine you are a junior lawyer at a commercial law firm. The firm practises in the usual areas: dispute resolution; insolvency; employment law; commercial property; energy, mining and resources; banking and finance; mergers and acquisitions. There is a certain excitement within the office because a new colleague is starting today and there is a lot of hype about his abilities, efficiency and work ethic; indeed, the partners have handpicked him. He arrives and introduces himself to you: his name is Ross. Ross, however, is not like you or any of your other colleagues. Rather, Ross is the world's first artificially intelligent lawyer built on IBM's cognitive computer called Watson (Watson himself being

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a master of US quiz show *Jeopardy!*¹).² Ross is an expert at research. He monitors legal developments in your jurisdiction, and around the world, at all times; he can be requested to complete tasks and solve legal problems; and he can receive instructions, and deliver his findings, in plain English. Ross is a super-computer capable of thinking for himself. In many ways, Ross is a better junior lawyer than you. You are, understandably, very worried.

One does not necessarily need Richard Susskind to point out that technology (and artificial intelligence ('AI')) will greatly shape the future practice, study and administration of law. By this I mean no disrespect to Professor Susskind: his studies on the future of professions,³ and the legal professions specifically,⁴ are some of the leading studies in the field. But to deny the continued influence of technology is either to completely ignore the transformative role that it has played within the legal professions in the last decade or two, or to assume (without cause) its sudden demise. Moore's law suggests that there will be no sudden demise,⁵ and, although that specific theory may be questioned, the fact remains that the influence of technology and AI will continue into the foreseeable future.

What does this mean for the practice, study and administration of law? Is it all doom and gloom for future young lawyers who will not only have to compete against their peers for an ever-decreasing number of legal jobs, but will now come up against actual machines? Will traditional courts become redundant, replaced by virtual courtrooms, online dispute resolution and predictive technology? Will online learning continue to influence the way law is taught in our universities and will future technological developments shape how law is studied and critiqued by academics? Are there certain aspects of this technological revolution that will challenge established legal doctrine and principle? If so, how will the tension be resolved?

The answers to these questions are complicated and it is not the aim of this short paper to provide a comprehensive manuscript on the future impact of technology

¹ Jo Best, 'IBM Watson: The Inside Story of How the Jeopardy-Winning Supercomputer Was Born, and What It Wants to Do Next', *Tech Republic* (September 2013) <<http://www.techrepublic.com/article/ibm-watson-the-inside-story-of-how-the-jeopardy-winning-supercomputer-was-born-and-what-it-wants-to-do-next/>>.

² Cecille De Jesus, 'Artificially Intelligent Lawyer "Ross" Has Been Hired By Its First Official Law Firm', *Futurism* (11 May 2016) <<http://futurism.com/artificially-intelligent-lawyer-ross-hired-first-official-law-firm/>>.

³ Richard Susskind and Daniel Susskind, *The Future of the Professions: How Technology Will Transform the Work of Human Experts* (Oxford University Press, 2015).

⁴ Richard Susskind, *Tomorrow's Lawyers: An Introduction to Your Future* (Oxford University Press, 2013) (his latest foray into the topic).

⁵ Gordon Moore, 'Cramming More Components onto Integrated Circuits', *University of Texas* (Web Page, 19 April 1965) <<http://www.cs.utexas.edu/~fussell/courses/cs352h/papers/moore.pdf>>.

on the law. The task of this paper is more humble than that. First, it will argue that the last two decades of technological change has, by and large, had positive results on the study, practice and administration of law. Fundamentally, technology has, to date, made the law more accessible and more convenient.

Second, this paper identifies three key themes that arise in relation to the impact of technology on the legal professions in the next decade:

- Technology will greatly empower ordinary people in the conduct of their legal affairs, putting them in the driver's seat.
- There will be a gradual trend towards 'virtual law'; that is, technology will see an uptake in online legal services, legal studies and legal proceedings, and some experimentation with virtual reality.
- AI will see legal research get faster and more efficient. What we probably will not witness in the next decade are the 'sky-is-falling' predictions of some commentators.

In this context, I will argue that judges, barristers, solicitors, law scholars and students should not get too worried about the future of their professions. There will be change — there is no doubt about that.⁶ But predictions about machines completely replacing lawyers in ten or so years⁷ are unsubstantiated and we should not overstate the detrimental effects that technology, as a disruptive force, will bring to the legal professions. Transitioning will be important but opportunities will exist for those with entrepreneurial tendencies. Technology is not an answer or an outcome: it is a tool to be used by legal professionals to achieve their individual and collective goals.

Thirdly, this paper will contend that members of the legal professions must adopt a two-pronged approach to this new wave of technological change. First, they must be ready, willing and able to adapt — an overly sceptical or dismissive attitude will see lawyers, courts and academics lose clients, relevance and authority. Second, they must adopt a critical and cautious approach to major reform, with an eye to legal principle. Fundamentally, it is technology that must comply with our system of justice, and not our justice system with the expediencies of technology.

⁶ See S Fodden, 'CBA Legal Futures Initiative Contributing Perspective Voices of Change: Canadian Social Media and Other Writings on the Future of Legal Practice' (Paper, Canadian Bar Association, 2013) 13–14.

⁷ Jordan Furlong, 'And the Walls Came Down', *Law 21* (Blog Post, 17 October 2012) <<http://www.law21.ca/2012/10/and-the-walls-came-down/>>.

2 Old Hat Technologies

It may surprise some younger readers to learn that it was only in the late 1990s that the High Court first implemented medium neutral citations, becoming the first court in Australia to do so.⁸ It may also surprise some readers that this type of simple and inoffensive reform was the subject of much controversy in the United States, where some State jurisdictions still rely exclusively on traditional (often selective) law reports.⁹ The 1990s also saw the implementation of other forms of technology that we now take for granted, including court hearings conducted by video-link and the almost-instant publication of judgments on the "world wide web".

These (now 'old-hat') technological developments have resulted in major benefits for users of our legal system. First, they have made the law far more accessible. Courts are no longer just 'open' to the public when a hearing is scheduled. They are, in many ways, open 24 hours a day, 7 days a week. At the date of writing, the Court of Appeal of Western Australia delivered its judgment in the case of *Ardela Holdings Pty Ltd v Hateley* ('*Ardela Holdings*').¹⁰ Within a couple of hours, that decision was available for the public to view and download from the Court's website.¹¹ This may not seem that significant or important to many lawyers these days where instant communication is the norm and a world without the internet is barely comprehensible. But, comparatively speaking, it is a very recent development that only became normalised in the 21st century.

One of the grounds of appeal in *Ardela Holdings* was that the primary judge erred in law in failing to apply the standard of proof required by the application of the principles in *Briginshaw v Briginshaw* ('*Briginshaw*').¹² The High Court's decision in *Briginshaw* was delivered in 1938. A modern lawyer would probably have a hard time imagining how long it would have taken for the principles enunciated by the High Court in *Briginshaw* to reach others beyond the immediate parties to the proceeding, let alone for those people to obtain an actual copy of the Court's reasons for decision. The Court of Appeal's reasoning in *Ardela Holdings* was available immediately, to anybody, free of charge. It is incontrovertible that the availability of actual judicial decisions is of fundamental importance in our common law system — the publicity of law being, to some scholars, an essential

⁸ Andrew Mowbray, Graham Greenleaf and Philip Chung, 'A Uniform Approach for Vendor and Media Neutral Citation – the Australian Experience' (Speech, Citations Workshop: Strategies for Accessing Law and Legal Information, 11–12 March 2000).

⁹ Peter Martin, 'How Structural Features of the U.S. Judicial System have Affected the Take-Up of Digital Technology by Courts' (2010) 1(1) *European Journal of Law and Technology*.

¹⁰ *Ardela Holdings Pty Ltd v Hateley* (No 2) [2016] WASCA 141 ('*Ardela Holdings*').

¹¹ 'Judgments', *Supreme Court of Western Australia* (Web Page) <<https://www.supremecourt.wa.gov.au/J/judgments.aspx>>.

¹² *Briginshaw v Briginshaw* (1938) 60 CLR 336 ('*Briginshaw*').

characteristic of law itself.¹³ A population's ability to access the rules and norms that govern their relationships with each other (and the State) should not be underestimated.

The same point can be made about access to legislation as well. Primary legislation, delegated legislation, ordinances, by-laws, promulgations, and the like, are just a Google search and a click away. This does not necessarily mean that the answers to one's thorny (or even not-so-thorny) legal questions can be found on the internet (though that's an issue to which I will come). Rather, the point is that just two short decades ago the very existence of most pieces of legislation was hard enough for the average person to determine. At the date of writing, if one searches 'property law Vic' in Google, the top three results lead one to the *Property Law Act 1958* (Vic). There are also websites that collate online information on property law and provide links to more or less every piece of Victorian legislation that touches upon the law of property.¹⁴ Some legislation databases even allow you to compare different versions of an Act to see (in red and blue formatting) what has changed from one date to another,¹⁵ helping you to overcome any tricky commencement issues. The law is, quite literally, and like most information, at the tips of one's fingers.

Of course, it is not just judgments that are accessible on an almost-instant basis, several courts around the world are video recording court proceedings and making them publicly available too.¹⁶ Any person so inclined can sit down and watch the High Court in action on the Court's website,¹⁷ having already downloaded the parties' written submissions. For those with less time and an obsession with detail, you can simply read the transcripts.¹⁸ For those who prefer the physical experience of watching a hearing, daily court lists are available on the internet for you to peruse and find your matter of interest. You can attend the next day and observe the proceedings from the gallery. Some courts have even implemented real time (unofficial) transcripts which are put up onto monitors in the courtroom within seconds of being spoken.¹⁹ From a technological

¹³ Lon Fuller, *The Morality of Law* (Yale University Press, 1969), 74ff.

¹⁴ See, eg, 'Property Law', *Foolkit* (Web Page) <<http://www.foolkit.com.au/vic/lawyers/property-law>>.

¹⁵ State Law Publisher of Western Australia, <<https://www.slp.wa.gov.au>>.

¹⁶ A few examples include the Supreme Court of the United Kingdom, the Supreme Court of Canada, the High Court of Australia, the International Court of Justice and the European Court of Human Rights, among others.

¹⁷ See 'Recent AV Recordings', *High Court of Australia* (Web Page) <<http://www.hcourt.gov.au/cases/recent-av-recordings>>.

¹⁸ See 'High Court of Australia Transcripts', *Austlii* (Web Page) <<http://www.austlii.edu.au/au/other/HCATrans/>>.

¹⁹ Robert McDougall, 'The Uses and Abuses of Technology in the Courtroom' (Speech, Society of Construction Law Australia Conference, 2013) 4-8 <www.austlii.edu.au/au/journals/NSWJSchol/2013/29.html>.

perspective, the last two decades have enabled the principle of 'open justice' to blossom. The content of the law, as well as the happenings of the courtroom, are more accessible than ever.²⁰

The practice and administration of law is also, in many ways, more convenient. Convenience saves time and money. Consider these examples:

- Court video-links allow prisoners to appear in court without the arduous process of leaving the prison; permit interstate and (occasionally) international representation in a more timely and cost-effective manner; and have had a tremendous impact on the ability of remote communities to access justice.²¹ They also work both ways: litigants can digitally project into courtrooms, or, if necessary, judicial officers can do the same.
- Medium neutral citations and reporting allow the public to access almost all substantive judicial decisions with ease. Whereas once upon a time that obscure unreported judgment so crucial to your case was almost unfindable, now it is just as easy to find as any reported decision (and, practically speaking, has just as much authority).²²
- Email has not only allowed for quicker and more convenient correspondence between practitioners (permitting a greater opportunity for conferral²³), but has also been incorporated into the practices of many courts when receiving documents from parties (such as outlines of submissions, minutes of consent orders, available dates etcetera).²⁴ Email is also used to serve documents on other parties provided personal service is not needed (documents have even begun to be served via social media).²⁵
- Electronic filing and e-trials are also becoming more popular – the benefits of which speak for themselves (especially their environmental advantages). Very recently, the Victorian Supreme Court has conducted the much-reported *Oswal v ANZ* litigation via e-trial with great success –

²⁰ This should not be confused with 'access to justice'; that is, the ability of people (particularly certain groups of people) to effectively participate in our justice system. There are still very many issues with access to justice.

²¹ Anne Wallace, 'Virtual Justice in the Bush: The Use of Court Technology in Remote and Regional Australia' (2008) 19 *Journal of Law, Information and Science* 1.

²² See generally Justice Stephen Gageler, 'What Is Information Technology Doing to the Common Law?' (2014) 39 *Australian Bar Review* 146.

²³ Whether that opportunity is taken up is another question.

²⁴ In my personal experience formerly working as a judge's associate, parties would often send through various types of documents (including affidavits) by email prior to a hearing for convenience (of course, originals still had to be filed in hard copy).

²⁵ Thomson Reuters, *The Future of the Courts* (White Paper, 17 March 2015) 5.

though some commentators have pointed to the tendency for e-trials (combined with emails) to produce copious amounts of documents.²⁶

- Precedent databases of legal documents within law firms, together with some document automation programs, contribute to the efficiency with which many complex commercial arrangements can be drawn up and executed. They also help establish consistency, and combine knowledge and expertise over time and across specialist areas.
- Since the mid-2000s, electronic discovery (together with technology-assisted review ('TAR')) has streamlined discovery and due diligence, saving many hours (and reducing fees) in the process. There is also research which suggests that TAR programs (eg Ringtail, Reprise, and Safelink, amongst others) – which use automated tools to prioritise and select documents – yield superior results on average when compared to exhaustive manual review.²⁷
- Extensive online research databases (LexisNexis, Westlaw, CCH Intelliconnect etcetera) combine legislation, commentary, cases, journal articles, legal dictionaries, and a whole host of other information in the one place with a high level of integration between the various components. For example, if a lawyer wants to find cases that have considered s 15 of the *Acts Interpretation Act 1901* (Cth), LexisNexis produces 59 results within a matter of seconds.²⁸ The list of cases can be refined further by using search terms. The lawyer can then see if any journal articles (or indeed other cases) have referred to any of the cases on the list. A process that once took hours (if not, in some cases, days) can be completed within the hour.

This does not mean that the technological transformation that has taken place has led to a legal utopia or has had only positive results. I have already alluded to the tendency for these technologies to produce copious amounts of documents and information, which can quite often unduly burden lawyers, the courts and, ultimately, the clients themselves. Very recently a colleague of mine was involved in a document review of hundreds of thousands of documents in preparation for litigation. There was little doubt that only a very small percentage of those documents were actually useful, and an even smaller percentage would end up

²⁶ Justice Tom Bathurst, 'Duties of Bar and Bench: Some Reflections on Case Management and Judicial Bias' (Speech, NSW Bar Association, 29 March 2014), <<http://www.austlii.edu.au/au/journals/NSWJSchol/2014/20.pdf>>

²⁷ Maura Grossman and Gordon Cormack, 'Technology-Assisted Review in E-Discovery can be More Effective and More Efficient than Exhaustive Manual Review' (2011) 17 *Richmond Journal of Law and Technology* 1.

²⁸ A similar task (and observation) was undertaken more than ten years ago; Justice Ruth McColl, 'IT in the Courtroom from Both Sides of the Bench – The Transformation of Justice' (2004) 6 *UTS Law Review* 13.

before the court. Even then, courts often have the misfortune of receiving large volumes of documents, sometimes in excess of 500,000 pages.²⁹

The pros and cons of this technological revolution are perhaps evidenced best where law, for many lawyers, begins: university. Chief Justice Warren has recently observed:³⁰

The delivery of legal education today is unrecognisable compared with how it was delivered even a generation ago. Law students still do all the same things we did – they attend lectures, conduct legal research, submit assignments, receive feedback, and communicate with lecturers and fellow students. However, they do these things largely online. Some students enrol in ‘external law degrees’ and might not even set foot on campus until exam time. I can envisage a day in the not too distant future when students sit their exams online too.

There is no doubt that the online technological transformation of the two decades has had many benefits for both academics and law students. The advances made to legal databases in terms of both content and search capabilities (and, to a much lesser extent, the adoption of medium neutral citations) have created a significantly deeper pool of resources from which scholars and students can draw. Legal writing, publishing, and learning are also partially bypassing the more traditional method of publications in journals, edited chapters and books, as legal blogs proliferate across the internet and increase in popularity. Take, for instance, the blog *Constitutional Critique* maintained by distinguished constitutional law scholars Professors Anne Twomey and Helen Irving.³¹ Other academic blogs include *Amicus Curiae* (a blog that discusses the role of women in the law as well as a variety of legal issues),³² the *Castan Centre* (which has a focus on human rights law),³³ and the University of Melbourne law school’s *Opinion on High*,³⁴ among others. For better or worse, quite a lot of the information I acquired for the purpose of this paper was obtained via LinkedIn, where colleagues of mine (as well as law firms and academics) post links to a variety of different blogs and legal updates from Australia and around the world. Given the profession-

²⁹ Justice Ronald Sackville, ‘Mega-Litigation: Tangible Consequences Flow from Complex Case Management’ (2010) 48(5) *Law Society Journal* 47, talking about his Honour’s own experience in *Seven Network Ltd v News Ltd* [2007] FCA 1062. See also Justice Peter Vickery, ‘Managing the Paper: Taming the Leviathan’ (2012) 22 *Journal of Judicial Administration* 51.

³⁰ Chief Justice Marilyn Warren, ‘Embracing Technology: The Way Forward for the Courts’ (2015) 24 *Journal of Judicial Administration* 227, 229.

³¹ See ‘Constitutional Critique’, *University of Sydney* (Blog) <<http://blogs.usyd.edu.au/cru/>>.

³² See *Amicae Curiae* (Blog) <<https://amicaecuriae.com>>.

³³ See *Castan Centre* (Blog) <<https://castancentre.com>>.

³⁴ See ‘Opinions on High’, *University of Melbourne* (Blog) <<https://blogs.unimelb.edu.au/opinionsonhigh/>>.

focused nature of LinkedIn, it is not surprising that the use of technology in the legal professions was a popular topic among my connections.

As Chief Justice Warren notes in the passage quoted above, law students can do almost everything online these days, with lectures recorded (often both audio and visual), online assignment submission, online feedback and tutorial chat boards. Programs such as Blackboard and Moodle create a virtual university experience where students can access all the information they need about their subjects and interact with both teachers and peers. Students can reap huge benefits from these technological changes, especially those who are unable to physically attend the university campus. As Justice Edelman has observed, this technology also has the potential to effect demographic change in our universities 'more dramatically than ever in history'.³⁵ Whilst a high degree of education inequality still exists between different socio-economic and ethnic groups, online learning (especially free online learning – ie Massive Open Online Courses (or 'MOOCs')) has the capacity to improve the situation. Whether it does, however, is still dependent on the people, organisations and governments who regulate tertiary education.

It is possible, of course, to find fault in this new academic environment. The online technological revolution has, arguably, come at the expense of 'interpersonal' exchange and experience,³⁶ between academic and student, student and student, and, indeed, even academic and academic. It has, in some ways, contributed to the commodification of tertiary education such that the primary (perhaps sole) purpose of legal learning is to obtain a law degree, which is a necessary prerequisite for a job in the legal profession. Some would say, quite reasonably, that 'education' has suffered as a consequence.

The take-away observations from the past two decades of technological change are, however, largely positive for all legal professions, be it the study, practice or administration of law:

- The law has become more accessible and open to lawyers, judges, students, scholars and, perhaps most importantly, the public;
- Studying, practising and administering the law has largely become more convenient; and
- The sky has not fallen in – it is just a slightly different shade of blue.

³⁵ Justice James Edelman, 'Challenges for University Education in the Next Century' (Speech, Convocation of UWA, 20 September 2013) <www.surpremeccourt.wa.gov.au>.

³⁶ *Ibid.*

3 What About All Those Clouds?

What does the next decade look like? Are there clouds on the horizon threatening to make that blue sky grey? If the last two decades of technological change has, by and large, led to greater accessibility and convenience, then will this continue? Will technology still be a friend to members of the legal professions, or will it become their enemy?

Contrary to the above rhetoric, it is important not to get too carried away. Is there an artificially intelligent lawyer called Ross from the opening paragraph of this paper? Yes (though he is referred to as ROSS). He has, in fact, been 'hired' by law firm Baker & Hostetler in the United States in their bankruptcy practice,³⁷ (though I think it more appropriate to say he has been 'bought'). Is he a better junior lawyer than the vast majority of junior lawyers out there? With greatest respect to him and his creators, I highly doubt it. As Andrew Arruda (CEO and co-founder of ROSS) has himself stated, AI is not designed to replace lawyers. Rather, it:³⁸

... will be able to bridge [the] divide between humans who need services and the lawyers that can provide it. ROSS is one tool that lawyers can put in their toolkit and reach a really strong market that is in need for greater access to justice.

To put it another way: 'When you look at AI and the law from that perspective, there is no fearsome force coming *for* us. There is only a formidable force that's coming *with* us, to work alongside us'.³⁹ Indeed, a very recent study in New South Wales, which examines the future workforce trends in that State, together with emerging technologies and their potential impacts, found that barristers and solicitors were at only a 9.4% risk of computerisation, and judicial and other legal professionals at a 9.5% risk of computerisation.⁴⁰ If you think that is too much of a risk, spare a thought for butchers and small goods makers (96.4%), bank workers (95.7%), and sign-writers (95%).⁴¹

So, what will the next ten years look like?

³⁷ De Jesus (n 2).

³⁸ Ed Sohn, 'alt.legal: Can Computers Beat Humans At Law?', *Above the Law* (Web Page, 23 March 2016) <abovethelaw.com/2016/03/alt-legal-can-computers-beat-humans-at-law> (interviewing Arruda).

³⁹ Ibid.

⁴⁰ Chris Angus, 'Future Workforce Trends in NSW: Emerging Technologies and Their Potential Impact' (Briefing Paper No 13/2015, NSW Parliamentary Research Service, December 2015) 73.

⁴¹ Ibid 68.

3.1 People empowerment

There is no doubt that many emerging technologies (including AI and machine learning) are geared towards empowering ordinary people in the conduct of their legal affairs. This was Andrew Arruda's point in the passage quoted above.

This is not necessarily a new thing. For instance, many websites have had their own online dispute resolution systems for years, which are simply utilised by consumers and vendors (eg eBay and PayPal). This space, however, is likely to grow and get more sophisticated, capable of managing rather complicated legal issues. Take for example, Dutch-based online program, Rechtwijzer, which has already moved into the United Kingdom and Canada and is now being seriously considered by National Legal Aid and RMIT University here in Australia.⁴² Rechtwijzer is an online dispute resolution system that can mediate divorces, tenancy disputes, as well as employment, debt and consumer matters. Without wanting to undersell it, Rechtwijzer is a rule-based system that seeks to provide solutions to a large range of matters by asking questions of its users. Does it replace more formal means of resolving disputes? No. But its sophistication means that it has the ability to provide comprehensive results and has the advantage of being driven by those who are affected.

Online dispute resolution ('ODR') is a huge growth area, though it does not necessarily have to by-pass more formal institutions. A report by the Civil Justice Council of the United Kingdom released in February 2015 strongly advocated for the introduction of a government-run ODR system for low value civil claims.⁴³ The difference is that the ODR system proposed would not be solely governed by a rule-based computer program but rather conducted by an actual judicial officer online. The system is designed to ensure that those with minor claims are able to access justice without going through the cost, delay and complexity of traditional litigation. The EU has already enacted regulations that are designed to establish an extensive online system dealing with consumer complaints.⁴⁴ Professor Tania Sourdin notes that ODR here in Australia 'will be informed by both local and international developments' and has been recently supported by both the Productivity Commission and the Australian Centre for Justice

⁴² Rachel Brown, 'Robot Lawyers Could Make Time-Consuming, Expensive Court Conflict Thing of the Past', *ABC News* (online, 6 July 2016) <www.abc.net.au/news/2016-07-06/robot-lawyers-dutch-conflict-resolution-technology-on-its-way/7572488>.

⁴³ Online Dispute Resolution Advisory Group, Civil Justice Council, *Online Dispute Resolution For Low Value Civil Claims* (Report, February 2015).

⁴⁴ Graham Ross, 'Online Dispute Resolution', *Internet Newsletter for Lawyers* (January 2013) <<http://www.infolaw.co.uk/newsletter/2013/01/online-dispute-resolution/>>; the UK has actually fallen into line with the EU, passing the *Alternative Dispute Resolution for Consumer Disputes (Competent Authorities and Information) Regulations 2015* (UK).

Innovation.⁴⁵ It comes as no surprise that a system that resolves minor civil disputes between individuals from the comfort of their home, without the hassle of acquiring expensive legal expertise or the necessity of skipping work to attend a hearing, is of considerable advantage to many people.

People empowerment does not necessarily have to involve the adjudication of rights and obligations as with ODR. It can simply manifest as the provision of what is essentially legal advice. Joshua Bowden, a London born second-year Stanford University student, recently created 'DoNotPay' – a chatbot that has successfully helped users contest over 160,000 parking tickets across London and New York, free of charge.⁴⁶ In a similar way to Rechtwijzer, DoNotPay works out if an appeal is available by asking the users a series of questions (whether the parking signs were visible, etc.). The formulaic nature of parking regulation lends itself to rule-based programs, and Bowden is already thinking of expanding it to other areas.⁴⁷ In many ways these systems are not too different to systems already in use in Australia. Take, for instance, the Unfair Dismissal Application Quiz on the Fair Work Commission's website.⁴⁸ The quiz helps dismissed employees work out whether they are eligible to make an unfair dismissal application, again by asking them a series of questions primarily aimed at making sure the jurisdictional prerequisites are met (e.g. income threshold; length of employment). It must be remembered, though, that these systems do not have the capability to give fully-fledged legal advice – they simply provide starting points for ordinary people to engage with the legal system. For example, working out if a modern award covers a particular employee can be quite the exercise and not something the FWC's quiz can handle if the employee does not already know whether he or she is covered.

There is no doubt that we will also see more automation within the legal professions – another aspect of the latest technological wave that has caused some concern among the legal professions, especially junior transactional lawyers. Take, for instance, 'smart contracts' which is an application on Blockchain (Blockchain referring to new database technology where information

⁴⁵ Tania Sourdin, 'Justice and Technological Innovation' (2015) 25 *Journal of Judicial Administration* 96, 99. Michael Kirby has very recently advocated ODR in Australia for low value civil claims: see John Stewart, 'Courts Should Move Online to Improve Accessibility, Lower Costs, Michael Kirby Says', *ABC News* (online, 3 August 2017) <<http://www.abc.net.au/news/2017-08-03/courts-cases-should-move-online-michael-kirby-says/8770858>>.

⁴⁶ Samuel Gibbs, 'Chatbox Lawyer Overturns 160,000 Parking Tickets in London and New York', *The Guardian* (online, 28 June 2016) <www.theguardian.com/technology/2016/jun/28/chatbot-ai-lawyer-donotpay-parking-tickets-london-new-york>.

⁴⁷ *Ibid.*

⁴⁸ See 'Unfair Dismissal Eligibility Quiz', *Fair Work Commission* <<https://www.fwc.gov.au/termination-of-employment/unfair-dismissal/eligibility>>.

is shared across a network of users). ‘Smart contracts’ refer to computer protocols which verify and execute the terms of a contract, removing the need for humans to monitor compliance and enforcement.⁴⁹ This is an example of what Professor Susskind calls ‘commoditised legal work’ – legal products that are available on the internet as a form of online legal service at little or no cost.⁵⁰ As Professor Susskind also points out, ‘automated document assembly or production tends to have the added advantage that the user answering the questions need not be a legal expert or even a lawyer.’⁵¹ Again, this technology involves legal documents (mostly contracts) being automatically generated by a computer after the user answers a series of questions. The use of automated processes is likely to grow within our court systems as well, especially in the area of case management.⁵²

Blockchain technology has a diverse range of applications, both inside and outside legal transactional work. It is essentially a distributed database (or decentralised ledger) that ‘records transactions between parties efficiently and in a verifiable and permanent way.’⁵³ Instead of having one database managed by one central entity, Blockchain replicates the database for each user, and those databases are then synchronised via the internet. It can also be set up so as to trigger transactions automatically. No one body is responsible for maintaining and verifying the transaction in question, and communication between the users occurs directly without an intermediary. Consider, for example, a transfer of land with certain conditions-precedent. The contract could be set up such that it would self-execute upon those conditions-precedent being satisfied. Rather than a central manager (for example, a lawyer) verifying the satisfaction of those conditions and ensuring compliance with the contract, a number of other users of the Blockchain can verify compliance and record that on the system.

According to some commentators, the impact of Blockchain technology will be widespread:⁵⁴

With blockchain, we can imagine a world in which contracts are embedded in digital code and stored in transparent, shared databases, where they are protected from deletion, tampering, and revision. In this world every agreement, every process, every task, and every payment would have a digital record and signature that could be identified, validated, stored, and shared. Intermediaries like lawyers,

⁴⁹ James Eyers and Misa Han, ‘Lawyers Prepare for “Driverless M7A” as Smart Contract Era Dawns’, *Financial Review* (online, 19 June 2016) <<http://www.afr.com/technology/lawyers-prepare-for-driverless-ma-as-smart-contract-era-dawns-20160616-gpknyz>>.

⁵⁰ Susskind (n 4) 28.

⁵¹ *Ibid* 26–7.

⁵² Thomson Reuters (n 25) 8.

⁵³ Marco Iansiti and Karam Lakhani, ‘The Truth about Blockchain’, *Harvard Business Review* (January 2017) <<https://hbr.org/2017/01/the-truth-about-blockchain>>.

⁵⁴ *Ibid*.

brokers, and bankers might no longer be necessary. Individuals, organizations, machines, and algorithms would freely transact and interact with one another with little friction. This is the immense potential of blockchain.

If the last decade saw the law at people's fingertips, the next decade will see relatively uncomplicated legal advice at people's fingertips. Legal and information services 'apps' have proliferated in the last couple of years and the industry is only set to grow. In the United States, 'AskaLawyer: Legal Help' allows people to message and chat live with lawyers free of charge.⁵⁵ In Australia, legal aid apps like 'LegalAidSA' and 'Below the Belt' are connecting vulnerable people to legal services;⁵⁶ the app 'Greatwill' allows people to type up their last will and testament on their smart phone;⁵⁷ Plexus's 'Promotion's Wizard' app automates the creation of terms and conditions, as well as permits, for organisations wanting to run a competition.⁵⁸ Other app creators include Rocket Lawyers, LegalZoom, Co-operative Legal Services, LawPath, EmploySure and LegalVision, among others.⁵⁹ These technological advances directly connect people with legal information and services, often at significantly less cost. Increasingly, we are seeing individuals themselves largely drive the conduct of their own legal affairs with the *assistance* of legal technology aimed at empowering them to make sufficiently informed decisions.

3.2 Virtual law

As technology advances, so too does our ability to conduct sophisticated virtual hearings, meetings, lectures, and other events. A recent research paper by Thomson Reuters predicts that:⁶⁰

... the current first steps being taken in the world of virtualization will be accelerated in the near future, as more and more elements of human participation in the justice process are uncoupled from the physical environs of the court building – and in some areas, cases come to be conducted entirely online.

Virtual, or digital, courts are being actively pursued around the world. For example, the UK Ministry of Justice announced its intention to make all courts

⁵⁵ Sourdin (n 45) 97.

⁵⁶ Ibid 97–8.

⁵⁷ Nigel Bowen, 'Cut Price Wills Threaten Law Firms', *The Sydney Morning Herald* (online, 25 August 2015) <<http://www.smh.com.au/small-business/entrepreneur/cut-price-wills-threaten-law-firms-20150610-ghl3qg.html>>.

⁵⁸ Ibid.

⁵⁹ Justice Tom Bathurst, 'Advocate v Rumpole: Who Will Survive?' (2015) 40 *Australian Bar Review* 185, 187.

⁶⁰ Thomson Reuters (n 25) 5.

fully digital by the end of 2016 with the aim of creating a 'paperless' system.⁶¹ A lot of the necessary technology is already available (video-links, document management systems etcetera) and, in many ways, it just needs a concomitant level of commitment from those with the power to implement change.

As Chief Justice Warren notes, it is already the case that a lot of evidence (especially documentary evidence) is becoming increasingly virtual and, in some cases, interactive.⁶² One does not have to be too imaginative to speculate about the next ten years. The majority of proceedings are civil proceedings: for example, in 2015 there were 2,967 new civil matters in the general division of the Supreme Court of Western Australia, compared to 400 criminal cases.⁶³ The overwhelming majority of evidence in civil cases is documentary evidence. Subject to adequate security protections, there is no reason why this evidence could not be shared between parties and the court using online sharing platforms and displayed on individual monitors during a hearing, with parties appearing via video-link. This technology already exists (i.e. e-trials combined with video-links),⁶⁴ but it is under-resourced and under-utilised with the result that it is 'clunky and sluggish'.⁶⁵ Governments who choose to provide more funding will probably see savings in the long-run. Given the well-documented reluctance by courts and governments to adopt technology in the courtroom,⁶⁶ it is difficult to predict anything more than a gradual improvement and consequent uptake of e-trials and related technology in the next decade.

What we might see less in the courtroom and more in the academic lab between now and 2027 is the occasional experiment with virtual reality technology which can be used to, for example, re-create crime scenes.⁶⁷ In May 2016, the European Commission granted £140,000 to Staffordshire University researchers to develop

⁶¹ Ministry of Justice and Damien Green MP, 'Digital Courts to Be Rolled Out Nationally', *United Kingdom Government* (28 June 2013) <http://www.reform.uk/wp-content/uploads/2016/02/Digital-Justice_WEB.pdf>.

⁶² Chief Justice Marilyn Warren (n 30) 230.

⁶³ Supreme Court of Western Australia, *Annual Review* (Report, 2015) 4.

⁶⁴ In 2015, a full-scale virtual mock trial was conducted in Brisbane (using distributed courtrooms) with success; Jeremy Carter, 'Virtual Courtrooms: Inevitable Reality or Potentially Damaging to Justice?', *ABC News* (online, 30 July 2015) <<http://www.abc.net.au/radionational/programs/lawreport/virtual-courtrooms-an-inevitable-reality-or-dangerous-justice/6657496>>.

⁶⁵ Chief Justice Marilyn Warren (n 30) 231.

⁶⁶ Cf McDougall (n 19) 4, which outlines the recent technological advances made during the upgrade to the New South Wales Supreme Court's Queens Square facilities. On the other hand, the Supreme Court of Western Australia has not yet fully embraced electronic filing though it hopes to do so at some point in 2017: Transcript of proceedings, *Ceremonial Sitting for the Opening of the David Malcolm Justice Centre* (Supreme Court of Western Australia, Martin CJ, 27 July 2016), 7-8.

⁶⁷ Chief Justice Marilyn Warren (n 30) 230-1.

virtual reality systems that would allow jurors to relive crime scenes using three dimensional technology, replacing the more traditional sketches, photos and videos.⁶⁸ The technology, which has only just started to kick off in the gaming industry,⁶⁹ is a long way from being implemented in an actual courtroom – yet its potential to heavily influence the fate of an accused should not be underestimated. It does, however, provide an opportunity for researchers to collaborate with the profession and the courts to develop these technologies (which normally contain built-in assumptions and options in order to generate different scenarios). On a broader level, virtual technology, together with what Professor Susskind has termed ‘relentless interconnectivity’,⁷⁰ creates both an environment and a capability for greater domestic and international collaboration both within a legal profession and across legal professions. To this end, increased cooperation between legal academia and the practicing profession, a topic which often generates much discussion,⁷¹ can (and perhaps should) be pursued through these emerging technologies.

What about ‘virtual law firms’? To some extent this depends on what one means by ‘virtual’: firms with a network of individual lawyers for hire (like LawPath), or fully-fledged legal services delivered exclusively online?⁷² Regarding the latter, see, for example, ‘Nest Legal’ – a boutique virtual law firm founded by Laura Vickers that engages in wills, probate, conveyance, and everyday consumer disputes, using Skype or FaceTime to have one-on-one dealings with its clients.⁷³ There is also ‘You Legal’ a virtual firm that, since being founded in October 2013 in South Australia by Sarah Bartholomeusz, has recently appointed an advisory board in order to assist with its national expansion.⁷⁴ You Legal offers corporate and commercial legal services, including property law, insolvency, business compliance, trademarks and patents, employment law, franchising, and

⁶⁸ ‘Juries “Could Enter Virtual Crime Scenes” Following Research’, *BBC News* (online, 24 May 2016) <<http://www.bbc.com/news/uk-england-stoke-staffordshire-36363172>>.

⁶⁹ Jim McCauley, ‘How Virtual Reality Gaming Will Change the World in 2016’, *VentureBeat* (8 January 2016) <<http://venturebeat.com/2016/01/08/how-virtual-reality-gaming-will-change-the-world-in-2016/>>.

⁷⁰ Susskind (n 4) 42.

⁷¹ Chief Justice Robert French, ‘Swapping Ideas: The Academy, the Judiciary and the Profession’ (Speech, Australian Academy of Law Symposium, 1 December 2008).

⁷² ‘Virtual Reality: Is the Future Already Here?’, *Law Society of New South Wales*, <<http://www.lawsociety.com.au/ForSolicitors/SmallPracticePortal/IT/Articles/VirtualReality/index.htm>>.

⁷³ Jacqueline Jubb, ‘How to Launch an Australian Virtual Law Firm: Insights From Legal Nest’, *Thomson Reuters* (12 November 2014) <<http://insight.thomsonreuters.com.au/how-to-launch-australian-virtual-law-firm-nestlegal/>>.

⁷⁴ Lara Bullock, ‘Virtual Firm Goes National’, *Lawyers Weekly* (20 August 2015), <<http://www.lawyersweekly.com.au/news/16994-virtual-firm-goes-national>>.

corporate governance.⁷⁵ With very few overheads, these virtual law firms can offer services at a discounted rate whilst adopting flexible hours and practices for the benefit of their clients. Today's traditional small and boutique legal practices can expect a lot more competition from these virtual competitors as 'mum and dad' consumers of legal services get savvy and explore their online options. Furthermore, as the years progress, those that consume these 'bread-and-butter' legal services (typically older generations) will be more technologically inclined than the older generations that have come before them, increasing demand for online legal services.

3.3 AI, Predictive Technology, and Super-Research Capabilities

Professor Susskind posits:⁷⁶

[AI-based legal problem-solving in the law] could be an online service that contains vast stores of structured and unstructured legal materials (primary and secondary sources), that can understand legal problems spoken to it in natural language, that can analyse and classify the fact pattern inherent in these problems, that can draw conclusions and offer legal advice, and that can even express this guidance in some computer-simulated voice (in an accent of the user's choosing, perhaps). AI will disrupt not just the world of practicing lawyers but also our common perception of the legal process. This is some years away yet but emerging technologies, developing exponentially, may bring artificial intelligence comprehensively to the law sooner than sceptics believe.

In many ways, some of the technologies discussed above incorporate a degree of AI, including our beloved learned friend, Ross. They do not, I suspect, quite rise to the level of "true human intelligence" that laymen (including members of the legal professions) often associate with AI, and which is captured by Professor Susskind in the above quotation.

Very recently, Justice Nettle has spoken about 'computational law systems that can make the intellectual decisions which fashion and perhaps ultimately determine the outcome of a case'.⁷⁷ As his Honour rightly points out, these computational law systems are already at work, especially in the area of technology assisted review.⁷⁸ But what about an AI program which could assess oral testimony given by a witness in the same way, or even in a better way, than

⁷⁵ Gina Baldassarre, 'Online Law Firm You Legal Named Best South Australian Startup at Telstra Business Women's Awards', *Startupdaily* (19 October 2015) <<http://www.startupdaily.net/2015/10/online-law-firm-you-legal-named-best-south-australian-startup-at-telstra-business-womens-awards/>>.

⁷⁶ Susskind (n 4) 49.

⁷⁷ Justice Geoffrey Nettle, 'Technology and the Law' (Speech, Bar Association of Queensland Annual Conference, 27 February 2016).

⁷⁸ *Ibid* 4.

a juror or judge?⁷⁹ Or a system which, having been programmed with a vast array of data and statistics, could predict the likelihood of an outcome by applying rules and algorithms to a set of facts which have simply been entered into the program by an external source (that is, by a human). If computers can one day interpret written documents and oral communications, assess credit, research and apply legal rules and principles, generate findings and produce probabilities, and then fashion that all into succinct and clear legal advice, then what is left for members of the legal profession to do? If computers will one day become lawyers, will computer lawyers one day become computer judges?

Take, for example, the announcement in December 2015 by UK law firm, Riverview Law, that it will be launching a series of legal virtual assistants powered by 'Kim' technology ('Kim' being short for 'knowledge, intelligence and meaning').⁸⁰ Riverview Law Chief Executive, Karl Chapman, has indicated that while these tools currently manage data to distribute work and save lawyers time, the next step will be to roll out a tool that can actually perform low level legal work and provide suggestions for what advice should be given to the client.⁸¹ There is also 'branching technology' currently being trialled by some judges in the Family Court of Australia, called 'Split-Up', that offers advice on how property is likely to be distributed if the matter was to be determined by a court in the event of separation.⁸² Branching and data searching technology helps create elaborate decision-trees that can suggest outcomes for disputes by applying the law (a set of in-built rules) to a description of the dispute (a product of both factual inputs, statistics and assumptions).⁸³ There are similar technologies being utilised in different areas of legal practice.⁸⁴ They offer a

⁷⁹ Ibid, citing Anthony D'Amato, 'Can/Should Computers Replace Judges?' (1977) 11 *Georgia Law Review* 1277.

⁸⁰ 'Riverview Law Announces Virtual Legal Assistants Powered by Kim', *Legalit Insider* (7 December 2015) <<http://www.legaltechnology.com/latest-news/riverview-law-announces-virtual-legal-assistants-powered-by-kim/>>.

⁸¹ Samantha Woodhill, 'Firm Launches "Virtual Lawyer" Software', *Australasian Lawyer* (29 April 2016) <<http://www.australasianlawyer.com.au/news/firm-launches-virtual-lawyer-software-215199.aspx>>.

⁸² Sourdin (n 45) 101; Justice Geoffrey Nettle (n 77). Though I do note the circularity of a court using technology which is intended to predict what a court would otherwise determine.

⁸³ Sourdin (n 45) 101, citing Chaphalkar, Iyer and Patil, 'Prediction of Outcome of Construction Dispute Claims Using Multilayered Perception Neural Network Model' (2015) 33 *International Journal of Project Management* 1827; P Savasdisara, 'Computer-Assisted Legal Analysis Systems: Part 1: The Origins of Computer-Aided Support Systems' (1994) 5 *Computers and the Law* 28.

⁸⁴ For example, there is software which allows a builder, drafting construction plans, to receive automated feedback and corrections in accordance with relevant regulations; see M Genesereth, 'Computational Law: The Cop in the Backseat', *Stanford University* (2015) <<http://logic.stanford.edu/complaw/complaw.html>>.

limited, but fascinating, glimpse into the possibilities of AI and predictive technology.

There is not enough room on these pages to fully explore the potential uses, abuses and ramifications of this kind of advanced technology. I do, however, want to make two points about the role of this technology in the study, practice and administration of law over the next decade. First, the vast majority of lawyers, academics and judicial officers probably will not even come across this level of AI. As Professor Susskind acknowledges: it is some years away at least. It has already been 16 years since electronic filing was implemented in the Federal Court,⁸⁵ and yet, as explained above,⁸⁶ not all courts have managed to follow suit. Technology that substitutes for a juror, advocate or judge will no doubt take a long time to develop, and then a very long time to be accepted. Second, and relatedly, queries remain whether the legal professions will ever accept such technology, if and when it comes into existence. In the words of Justice Nettle:⁸⁷

It is questionable, however, whether society would accept that the outcome of litigation should be determined by computer assessment of oral evidence; especially in criminal litigation. It is one thing to receive and value computer-generated legal advice as a working approximation of a possible outcome generated by the application of established rules to assumed facts ... But it would be quite another thing for litigants to accept a computer's assessment of their credit and reliability relative to that of opposing witnesses.

In cases where there are disputed facts in play, assessments of credit to be made, trust to be tested, open-textured rules to be applied, and a moral dimension to the issue in question, AI may (even if adequately prepared for the challenge) find itself being cast aside in favour of human analysis. That is not to write-off the future growth of AI and predictive technology within the law; it is just to put it in its 'human' context.⁸⁸

⁸⁵ The Federal Court of Australia first implemented e-lodgment facilities in 2001; see Philip Kellow, 'The Federal Court of Australia: Electronic Filing and the eCourt Online Forum' [2002] *University of Technology Sydney Law Review* 123.

⁸⁶ See Transcript of proceedings, *Ceremonial Sitting for the Opening of the David Malcolm Justice Centre* (Supreme Court of Western Australia, Martin CJ, 27 July 2016), 7-8.

⁸⁷ Justice Geoffrey Nettle (n 77), citing Ephraim Nissan, 'Select Topics in Legal Evidence and Assistance by Artificial Intelligence Techniques' (2008) 39 *Cybernetics and Systems* 333, 375-9.

⁸⁸ See Justice Tom Bathurst's argument about 'bespoke' legal work: Justice Tom Bathurst (n 59) 189; see also Anjanette Raymond and Scott Shackelford, 'Technology, Ethics and Access to Justice: Should an Algorithm Be Deciding Your Case?' (2014) 35 *Michigan Journal of International Law* 485.

What we are likely to see in the next ten years in the AI space is the growth of ‘super-research’ capabilities. After all, that is what Ross (or ROSS) essentially is: a research tool. Again, in the words of CEO Andrew Arruda:⁸⁹

Ross Intelligence is an AI researcher that allows lawyers to do legal research more efficiently, in a fraction of the time. It does that by harnessing the power of natural language processing and machine learning to understand what lawyers are looking for when conducting their research, then get smarter each time to bring back better results.

Research is essential to any law practice. Absent issues around cost, this technology may very well find its way into the hands of academics and courts to assist with their own legal research. From a practical point of view, ROSS has two important features that make it a new and exciting super-research tool:

- The ability to understand and process natural language requests and questions.
- The ability to learn and improve its researching capabilities by, in part, getting instant feedback from users as to the usefulness and accuracy of its searches.

So instead of using traditional online research tools with Boolean connectors, users of ROSS can ask it questions in the same manner that they would ask their peers. Unlike their peers, however, ROSS can instantly go looking for the answers from an almost limitless pool of information. ROSS is not capable, however, of mimicking certain human qualities and abilities. It cannot, for example, synthesise, analyse, or draw comparisons, nor act as an advocate.⁹⁰ In other words, ROSS is not the kind of AI that Professor Susskind is referring to in the passage cited above. It will not make lawyers redundant: it will simply change the way they research.

A German-based team of linguists, lawyers, and computational linguists has developed another super-research tool, CAL².⁹¹ The program gathers an enormous quantity of legal texts from around the world and analyses their interrelations, their structure and recurring patterns, creating a birds-eye view of the network of legal texts, and allows researchers to observe, reconstruct and, ultimately, predict legal developments. Dr Hanjo Hamann, co-founder of CAL², has high hopes that this technology will fundamentally change the way we do

⁸⁹ Sohn (n 38).

⁹⁰ Andrew Arruda, ‘ROSS’ (Speech, Artificial Intelligence and the Law Conference, Vanderbilt Law School, 13-14 April 2016), <https://www.youtube.com/watch?v=LF08X5_T3Oc>.

⁹¹ Micha Bues, ‘Legal Tech Will Fundamentally Change Legal Research – Interview with Dr. Hanjo Hamann’, *Legal Tech Blog* (16 February 2016) <<http://legal-tech-blog.de/legal-tech-will-change-legal-research>>.

legal research, especially in the area of legal statistics and meta-analysis.⁹² He believes that knowing the basics of data science and programming will become more relevant for serious legal researchers. For academics with an empirical focus, this will undoubtedly be the case, as technologies which assist in the collection and collation of evidence become more prevalent.

4 What Should One Do?

How do members of the legal professions take advantage of this changing environment?

4.1 Adapt to Change

Sitting idle and stubbornly refusing to change will inevitably lead to unemployment, loss of clients, loss of relevancy and greater obscurity, whether you are a lawyer, a barrister, an academic or a court. For instance, most of the abovementioned 'legal apps' are designed, ultimately, to directly connect users to further legal advice. As Professor Susskind has observed, 'IT can and will continue to be of use in assisting non-lawyers to recognise that they might benefit from some kind of legal input'.⁹³ Legal app creation or collaboration is one way to take advantage of the changing environment. So too can lawyers and law firms share expertise online free of charge, with the prospect of obtaining future work from clients whose matters grow beyond the assistance offered online.

One top tier Australian law firm has recently launched an online resources portal that 'allows exploration companies to access free legal information, including basic documentation, on a range of issues relevant to exploration activities'.⁹⁴ It will be aimed at junior to mid-cap miners, giving them access to standard form contracts, confidentiality agreements and term sheets, and marketed to them as a way of alleviating 'some of the pressure explorers are finding on their cashflow' in these tougher economic conditions.⁹⁵ Another top tier Australian law firm has announced plans to expand into the area of 'smart contracts' in a way that is designed to keep lawyers in jobs.⁹⁶ The plan involves a mixture of both digital

⁹² Ibid.

⁹³ Susskind (n 4) 88.

⁹⁴ See Tony Joyner, 'If You Want to Win, You Have to Be Clever', *Herbert Smith Freehills* (Article, 8 April 2015) <<http://www.herbertsmithfreehills.com/insights/issues/imperative-innovation-hub-if-you-want-to-win-you-have-to-be-clever/tough-times-call-for-collaboration-and-a-helping-hand>>.

⁹⁵ Ibid.

⁹⁶ Yolanda Redrup, 'King & Wood Malletsons Devises a Smart Contract Which Keeps Lawyers in a Job', *Financial Review* (online, 18 July 2016) <<http://www.afr.com/technology/king--wood-malletsons-devises-a-smart-contract-which-keeps-lawyers-in-a-job-20160712-gq3wyl>>.

and analogue contractual terms, the latter requiring human expertise to account for background information, unforeseen changes, and avoiding unintended consequences.

What law firms and lawyers should be aiming for is ensuring that, at the end of the virtual process, they are the ones to whom non-digitalised work is referred. For instance (and building on the FWC's Unfair Dismissal Application Quiz referred to above) one national Australian law firm has a digital product that helps determine the prospects of an unfair dismissal application, which can then lead to a traditional face-to-face meeting with a solicitor.⁹⁷ Embracing technology will avoid irrelevancy and, potentially, generate business. Whilst there are legal apps that are entirely virtual,⁹⁸ one should not easily dismiss the desire for a human element – especially in areas like employment law, family law, criminal law and probate. People empowerment does not have to mean professional disempowerment; it just means that legal professionals will need to think outside the box and approach their work differently. This is especially true for small and boutique firms, which must embrace technology to accommodate an increasingly cost-savvy client base.

First and foremost, preparing for technological change involves investing in technology. To this end, it is encouraging to see many Australian courts proactively embrace technological tools.⁹⁹ Permitting greater use of video-links, e-trials, electronic document management systems, and virtual courtroom technology is vital in ensuring that our justice system (a) remains relevant to an increasingly technologically sophisticated population, and (b) addresses the systemic issues with the ability of many groups and individuals to access justice.¹⁰⁰ As many courts and court administrators know, it will not be an easy task to secure funding in what is usually a very competitive government budget allocation process. This problem is equally shared by academics, who will have to convince universities to invest in legal technology and/or secure grants for the same purpose. In some ways, the duty falls on members of the practicing profession to lead the way in this regard.

The main challenge for academics will be ensuring that law students are well equipped for the world they are about to enter – not just for the next ten years,

⁹⁷ Chris Merritt, 'Artificial Intelligence Comes to the Law', *The Australian* (online, 20 June 2014) <<http://www.theaustralian.com.au/business/legal-affairs/artificial-intelligence-comes-to-the-law/news-story/4df5733012d56422c0dff525861cab5f>>.

⁹⁸ *Ibid*, referring to Plexus.

⁹⁹ I note the Queens Square refurbishment for the Supreme Court of New South Wales, as well as the new David Malcolm Justice Centre, which opened mid-2016 and is occupied by the Supreme Court of Western Australia.

¹⁰⁰ See generally Law Council of Australia, Submission No 96 to the Productivity Commission, *Inquiry into Access to Justice Arrangements* (13 November 2013); and James Cabral et al, 'Using Technology to Enhance Access to Justice' (2012) 26 *Harvard Journal of Law & Technology* 241.

but for the entirety of their careers. The technological changes over the next decade are likely to create new legal jobs that will first be occupied by today's law students.¹⁰¹ This, I suspect, will mean that more energy and resources must be devoted to learning how these technologies work and how they are likely to impact the practice and administration of law. As noted below, this should always be done with an eye to legal principle. Both studying legal technology, and incorporating technology into legal study, should not ignore the very academic enterprise of critical and independent scholarly thinking.

Regrettably, there is a lot of hyperbole out there about the potential consequences of technology and AI within the legal professions. This hyperbole often causes members of those professions to dismiss the whole notion of disruptive change and to ignore technological advancements completely. They do so, however, at their own peril.

4.2 Be critical and cautious

Whilst members of the legal professions must accept and embrace technological change (including AI), they must not forget that their job is fundamentally concerned with the law. At the end of the day, their jobs require that 'to do justice ... all other considerations are a means to an end'.¹⁰² Legal technology is no different: it is a tool to help us work towards justice in a more efficient and informed manner.¹⁰³ Naturally then, technology must be approached critically and with an eye to legal principle and constitutional limitations. It may be that, at least in some ways, it is the law itself (and the fundamental values which inform it) which resists certain technological advancements, and not the legal professionals. Again, there is little room here to canvass this topic in any great detail, but I will provide at least some examples of what I am referring to.

First, there is the well-established principle of 'open justice'. The interrelationship between this principle and technological change in the legal professions (especially the courts) is well traversed in a recent paper by Chief Justice Marilyn Warren;¹⁰⁴ accordingly, I will be brief. As I have argued above, the technological revolution of the past two decades has, by and large, led to greater accessibility in, and to, the law. However, the prospect of online dispute resolution and virtual courts does have the potential to undermine these developments. Public access to court proceedings is a basic democratic right and public confidence in the legal

¹⁰¹ See generally Susskind (n 4) ch 11 and ch 12.

¹⁰² To adopt the recent words of Chief Justice Robert French speaking about judicial power; *Alqudsi v The Queen* (2016) 90 ALJR 711, [1], citing Isaacs J in *R v MacFarlane; Ex parte O'Flanagan* (1923) 32 CLR 518, 549.

¹⁰³ See Clive Walker, 'Fundamental Rights, Fair Trials and the New Audio-Visual Sector' (1996) 59 *Modern Law Review* 517, 519.

¹⁰⁴ Chief Justice Marilyn Warren, 'Open Justice in the Technological Age' (2014) 40 *Monash University Law Review* 45.

system is vital to the legitimacy of the judiciary as an institution and to the maintenance of the rule of law.¹⁰⁵ Open justice could also, arguably, have constitutional significance.¹⁰⁶ It will be important that technology in the courtroom (and outside of it) develops in a manner consistent with this fundamental principle.¹⁰⁷ The same can be said in relation to the related doctrine of procedural fairness.

Second, we must all remember our professional ethical obligations. Automated processes, machine learning technologies, and computer-generated legal advice must fit into this equation. Whilst statutory reform can, and perhaps should, accommodate for technology, some ethical restrictions are based on well-founded principles. Take, for instance, the duty of a legal practitioner to avoid conflicts of interest.¹⁰⁸ How will this work when two people on either side of a matter get their 'legal advice' from the same legal app or online legal program? How do we identify the person who owes this important ethical obligation? Relatedly, who is actually providing this legal advice and how do we police it? Without necessarily advocating for the maintenance of the current monopoly on Australian legal practice,¹⁰⁹ there must be some way of ensuring that the advice is, at the very least, not negligent. Last, and this is always a concern when it comes to information technology, technological advances must be sure to comply with client confidentiality obligations. Security of information is essential.

Third, the use of technology during trials, especially criminal trials, must ensure that it complies with the rules of evidence. Virtual reality technology (to the extent that it enters into the equation) may, for example, run into certain problems when it comes to be tested against the hearsay rule. Furthermore, we must ensure that this technology does not unduly influence the perception (and biases) of jurors (and judges). Again, I am not advocating for a sceptical approach to the use of technology in the courtroom; but rather a critical and cautious one.

Fourth, we must remember that under our *Commonwealth Constitution* we have an integrated federal judicial system.¹¹⁰ We have (more so at the Commonwealth than State level) a separation of judicial power and a fiercely independent

¹⁰⁵ Ibid 46–7.

¹⁰⁶ It may be that 'open justice' has constitutional recognition in Ch III of the *Commonwealth Constitution*.

¹⁰⁷ Justice Michael Kirby, 'The Future of Courts – Do They Have One?' (Speech, Judicial Conference of Australia, undated) <http://www.hcourt.gov.au/assets/publications/speeches/former-justices/kirbyj/kirbyj_future1.htm>.

¹⁰⁸ See, eg, Law Society of Western Australia, *Legal Profession Conduct Rules 2010* (at 19 November 2010) pt 4.

¹⁰⁹ Professor Susskind contends that these monopolies will likely come to an end sooner rather than later, citing relatively recent developments in England and Wales; see Susskind (n 4) 5–10.

¹¹⁰ *Kirk v Industrial Court of New South Wales* (2010) 239 CLR 531.

judiciary. Furthermore, a Chapter III 'Court' (including a State Supreme Court) must have certain characteristics in order to comply with our nation's constitutional requirements.¹¹¹ Again, any major reform to our court system(s) (and, by extension, our legal profession) should bear these fundamentals in mind.

5 Conclusion

Technology in the law over the last two decades has, by and large, produced greater accessibility and convenience. Despite the hyperbole, there are still blue skies to come for all members of our legal professions. They can ensure this by adopting a proactive approach to the changing legal landscape caused by emerging legal technology (including AI). Whilst many developments will put power in the hands of consumers, law firms and courts can put themselves right in the middle of that process. An uptake of virtual technology will ensure relevance in an increasingly online world, and investing in AI and research technologies will ultimately help in delivering improved outcomes to clients, students, colleagues and users of our justice system. We must be careful, however, to make sure that progress does not rob us of principle – our approach should always be critical and cautious.

In the end, whilst Ross is probably not all he was made out to be, he is undoubtedly hard-working and he has taken some of the load off the firm's junior lawyers. The hype was overstated, but he is a welcome addition to the team.

¹¹¹ Ibid; including s 80 (trial by jury).