THE DEATH OF THE LEGAL PROFESSION AND THE FUTURE OF LAW

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This article identifies the five large-scale changes that have happened or are happening to the legal profession:

1. *How technology solutions have moved law from a wholly bespoke service to one that resembles an off-the-shelf commodity;*
2. *How globalisation and outsourcing upend traditional expectations that legal work is performed where the legal need is, and shifts production away from high cost centres to low cost centres;*
3. *How managed legal service providers – who are low cost, technology-enabled, and process-driven – threaten traditional commercial practice;*
4. *How technology platforms will diminish the significance of the law firm; and*
5. *How artificial intelligence and machine learning systems will take over a significant portion of lawyers' work by the end of the 2020s.*

The article discusses how these changes have transformed or are transforming the practice of law, and explains how institutions within the law will need to respond if they are to remain relevant (or even to survive). More broadly, it examines the social implications of a legal environment where a large percentage of the practice of law is performed by institutions that sit outside the legal profession.

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I INTRODUCTION

The legal profession is changing at a furious speed. Among a range of other drivers, technology, globalisation, and new client expectations are rewriting the assumptions that underpin the entire legal system. The provision of legal services in the future will not be confined to lawyers from a legal 'profession', and what we currently think of as the 'practice of law' will not just be delivered by lawyers.

What, then, will the future of law look like?

Legal needs in society will be met by new entities, including technology companies delivering document generation systems and artificially-intelligent legal support systems,[1] to multidisciplinary practices providing a combination of professional services that defy 19th century conventions.[2] Legal process outsourcing firms will be widespread, delivering technologically-mediated legal solutions across the globe, using the cheapest and/or best legal operators from jurisdictions outside those from where the work is commissioned.[3] Many large companies will adopt a managed-services strategy for their legal needs, an approach that does not necessarily involve law firms – or even lawyers, in order to deliver better quality legal product at the lowest possible price.[4] And technologically enabled roles in compliance – in areas like anti-money laundering, 'know your client' requirements, and financial services regulations – will come to replace large numbers of legal jobs in the commercial sector.[5]

In describing this future of the legal system, this article seeks to do two things. First, it looks at the nature of the changes to legal service delivery that have already occurred and which will occur in the next 20 years as a result of these large-scale pressures. By looking at trends that have already emerged, we can make some appropriately qualified predictions about how things are likely to change in the near future – as the science fiction writer William Gibson memorably said, 'the future is already here – it's just not evenly distributed'.[6]

The second aim of the article is to investigate the implications of these changes for the Australian legal profession, and for institutions like law firms or law schools that are part of the profession. The first implication of this investigation is that many actors in the new legal services market are poorly equipped to respond to the changes that are fast upon them, and that they need to change quickly to succeed in the future of law discussed here. But the second implication is perhaps more serious, and is the reason why this article's title references the 'death' of the legal profession. The changes to legal service delivery overwhelmingly favour

1 See below Part II and Part VI.

2 See below Part IV.

3 See below Part III.

4 See below Part IV.

5 Bruce MacEwen, 'How Big Is the NewLaw Revenue Suck?', *Adam Smith, Esq* (Blog Post, 24 January 2018) <https://adamsmithesq.com/2018/01/how-big-is-the-newlaw-revenue-suck/>. See below Part IV. For a discussion on employment impacts, see also Dana Remus and Frank Levy, 'Can Robots Be Lawyers? Computers, Lawyers, and the Practice of Law' (2017) 30(3) *Georgetown Journal of Legal Ethics* 501, 533–7.

6 'Books of the Year 2003: William Gibson', *Home Entertainment*, *The Economist* (online, 4 December 2003) <https://www.economist.com/books-and-arts/2003/12/04/home-entertainment>.

'alternative legal service providers' like legaltech companies, managed legal services companies, and legal process outsourcers. As a result, we are likely to see the gradual diminution of the legal profession as the main provider of legal services and as the guardian of legal ethics. The article asks therefore what will happen to the legal profession in the future of law foretold here, and what the future of law looks like when legal services are provided by those who do not see themselves as part of a legal profession.

The article proceeds as follows. Partss II through VI articulate the five large-scale changes to the provision of law in our community. Parts II to IV cover three changes that are already evident in the law. The first is to the way that technology solutions have moved law from a wholly bespoke service – think of a handmade suit, or pair of shoes – to one that resembles an off-the-shelf commodity, like a jacket created on a production line. The second is in globalisation and outsourcing, which upends traditional expectations that legal work is performed where the legal need is, and shifts production away from high cost centres to low cost ones. The third is in the rise of managed services, which involves a shift in corporate legal departments from purchasing costly customised advice from law firms, to using lower cost, technology-enabled and process-driven providers for significant parts of their legal needs.

Parts V and VI move on from discussing changes that have already occurred to those that will happen in the near future. The two changes here involve the emergence of legal platforms that diminish the central role of the law firm, and the rise of machine learning systems that will take over a significant portion of lawyers' work by the end of the 2020s. Oddly enough, although all of the breathless journalism foretells the end of lawyers at the hands of artificially intelligent machines,[7] it is actually the rise of platform technologies which will have the biggest impact on the evolution of the legal profession.

The concluding Part draws the implications of these changes together and asks what will happen to the legal profession and legal institutions in a future that looks very different from the past. It should be noted that the changes discussed in this article do not include those which may occur as a result of the COVID-19 crisis. It seems likely that the main COVID-19 induced change to the legal profession will be a greater commitment to remote working; but it is hard to predict what, if any, other changes will occur as a result of the pandemic we are currently living through.

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7 See Bruce MacEwen, 'Let's Hear It for AI Hype', *Adam Smith, Esq* (Blog Post, 16 December 2018) <https://adamsmithesq.com/2018/12/lets-hear-it-for-ai-hype/>:

> AI in law is the new [i]nnovation. The industry press can't write enough about it, law firm leaders and GC's have to be seen as in the vanguard, vendors (of course!) can't tout it enough, and no one, it seems, can worry about what it means for their future career enough. In terms of Gartner's classic hype cycle, law and AI seem to be approaching a peak.

See also Judith Bennett et al, 'Current State of Automated Legal Advice Tools' (Discussion Paper No 1, Networked Society Institute, April 2018) 31 <https://apo.org.au/node/143431>:

> A recent report (IBA, 2016) has suggested that the evolution of legal services from bespoke to commoditised and standardised or packaged services with the aid of ALATs 'are likely to yield significant benefits for consumers in terms of cost, quality and access to justice'.

II AUTOMATING AND COMMODIFYING LEGAL ADVICE

Lawyers have always assumed that legal language is arcane, legal knowledge is hard to come by, legal reasoning is a rare and specialised skill, and legal problems require an expensively trained specialist to resolve. The profession of law and the practice of law reflects these assumptions, as does legal education. Licensing and regulatory requirements similarly encode this assumption, by emphasising the difficulty of access to the legal market and the high level of training deemed necessary to be able to do legal work.

The reality, of course, is that many legal needs are relatively simple, fairly mundane and, these days, easily automated. Since the 1970s, artificial intelligence ('AI') researchers have developed rule-based expert systems to undertake automated decision-making in law.[8] Law was one of the first domains studied by AI researchers because it has so many clearly defined rules in so many different areas.[9] For many years, work in AI and law was restricted to research labs; but the recent combination of simple to use rule-based technologies[10] and a steady flow of venture capital money has led to an explosion of legal technology companies which can deliver low cost, commoditised services for certain types of legal needs. Rather than assuming that all legal services must be delivered via expensive humans giving custom advice – like Savile Row tailors making perfectly-fitting bespoke suits – legal automation now offers cheap, productised legal services for a range of 'off-the-rack' legal needs.[11]

Legaltech providers like *LegalZoom*, *Nolo*, *Rocket Lawyer*, and *LegalVision* have emerged to offer fast, cheap, and accurate legal services in areas where the law is routine and where there are lots of potential consumers: think property transactions, will drafting and probate matters, family law and divorce, and much of criminal law.[12] Other companies, such as *HighQ*, *Neota Logic*, *Oracle Policy Automation*, *Xakia* and *Josef*, provide simple to use expert system shells, chatbot authoring tools, analytics, and business logic workflow tools to law firms and

8 L Thorne McCarty, 'Reflections on Taxman: An Experiment in Artificial Intelligence and Legal Reasoning' (1977) 90(5) *Harvard Law Review* 837 discusses the development of Taxman, the first legal expert system developed at Stanford from 1971–73. See below n 55 and accompanying text.

9 Dan Hunter, 'Representation and Reasoning in Law: Legal Theory in the Artificial Intelligence and Law Movement' (LLM Thesis, University of Melbourne, 1995) ('Representation and Reasoning in Law') (copy on file with author).

10 Sometimes called 'robotic automation' or 'workflow automation' technology.

11 For a general discussion of how lawyers might become like mercers, cordwainers, wheelwrights, and other outdated artisans, see Richard Susskind, *The End of Lawyers?* (Oxford University Press, rev ed, 2010); Richard Susskind, 'Legal Informatics: A Personal Appraisal of Context and Progress' (2010) 1(1) *European Journal of Law and Technology* 1:1–17.

12 *LegalZoom* (Web Page, 2020) <https://www.legalzoom.com>; *Nolo* (Web Page, 2020) <https://www.nolo.com/>; *RocketLawyer* (Web Page, 2020) <https://www.rocketlawyer.com/>; *LegalVision* (Web Page, 2020) <https://legalvision.com.au/>. The same technology has been used for years in automated administrative decision-making, in areas like pensions and welfare determinations, and even social credit scoring in China. See Monika Zalnieriute, Lyria Bennett Moses and George Williams 'The Rule of Law and Automation of Government Decision-Making' (2019) 82(3) *Modern Law Review* 425.

corporate law departments, seeking to help them automate their practices and reap efficiency gains from computerisation.[13]

What then are the implications of these recent legaltech developments and this off-the-rack model of legal service delivery? The effects will differ depending on where one is in the legal profession and legal education system. First, we can say that anything which is simple to codify and has a consumer focus is not a good area of practice to be working in during the next ten years. In these areas we have already seen well-funded entrepreneurs swoop in with automation solutions to supplant lawyers, and the pace of change will only accelerate. There is already a plethora of document automation solutions, chatbots, legal apps, and so on. In the years to come, there will be many, many more.[14]

This development will be a particular problem for high street lawyers, since they make much of their living from consumer legal services that are easily automated, and they generally lack the skills or money to invest heavily in technology to improve their efficiency and profitability. We can therefore expect their ranks to thin significantly, although they will not die out altogether. Larger firms will probably not be dramatically affected by commodification; unless they happen to be particularly exposed to practice areas like property, probate, family, or criminal law, because all of these will be automated and commodified. Of course, this type of technology does have a role in larger firms, which will over time increase their productivity and efficiency through legaltech automation – meaning that they will need to hire fewer lawyers to service the same clients.[15]

For law schools, this development is also very significant. It will have a huge effect on graduates who expect to make a living from small legal practices, because there will be fewer of these. This will affect the viability of law schools whose graduates expect to practise this kind of law. This change will disproportionately affect low-ranked schools whose graduates tend to work in these types of practices.

Further, because of automation, we are unlikely to see an increase in demand for graduates at large and medium firms consistent with population growth – technology-based efficiency gains will mean that fewer lawyers will be able to service more clients. Older law schools at sandstone universities, with established track records, strong brand recognition, and deep alumni bases will prosper in this world. It will be new, under-resourced law schools which will bear the brunt of the changes from commodification and automation, since they will likely have

13 *HighQ* (Web Page, 2020) <http://highq.com>; *Neota Logic* (Web Page, 2020) <https://www.neotalogic.com/>; *Intelligent Advisor* (Web Page, 2020) <https://www.oracle.com/applications/customer-experience/service/intelligent-advisor.html>; *Josef* (Web Page, 2020) <https://joseflegal.com/>; *Xakia* (Web Page, 2020) <http://xakiatech.com>.

14 For a representative sample of legal automation tools, categorised across multiple dimensions, see 'AL 100 Legal Tech Directory', *Artificial Lawyer* (Web Page, 2020) <https://www.artificiallawyer.com/al-100-directory/>; 'Legalweek New York', *Legalweek* (Web Page, 2020) <https://www.legalweekshow.com/legaltech-tradeshow/>.

15 We will, of course, also see law firm winners and losers at the legaltech game, with some firms using automation to offer the same quality services at a cheaper price and thereby gaining market share, while others will close or fall behind, due to any number of related reasons: underinvestment in technology, failed implementations, and so on.

increasing difficulty placing their graduates. This will likely lead to a decline in student enrolment, decreased revenue, and a parade of other horribles.[16]

However, there are two large bright spots that apply across the board, both for law schools as well as society. Graduates with strong technological skills will be in demand in law firms – whether BigLaw, SmallLaw, OldLaw or NewLaw providers – and in legaltech companies, legal operations roles,[17] and in legal process outsourcing providers.[18] And in the very many under-lawyered parts of society, the huge unmet need for legal services will in time be met – but by computers, not by humans.[19]

III GLOBALISATION AND THE LEGAL PROFESSION

Globalisation has been a fundamental feature of economics and geopolitics for decades. Most people know this and understand, in general, the way that tariffs affect international trade, and how the development of the European Union changed the viability of their local manufacturers. They have seen how China's rapid economic development and entry into the World Trade Organisation meant that certain types of products could be made more cheaply in Asia and shipped around the world, reducing the viability of local manufacturing in high cost developed countries.

Globalisation has not been a core expectation of the legal profession or legal education. Law school curricula are typically tailored to meet the needs of the legal profession within a few kilometres' radius from the law school;[20] and legal regulators, accreditors, and licensure authorities are almost always focused on their territorial boundaries. This approach arises because lawyers have long been assured that market entrants from outside the jurisdiction will be forbidden by admitting authorities from practising law inside their jurisdiction. But this assurance has eroded significantly over the last few years. The reality has been quite different for at least the last decade, and developments over the next decade will make the point even starker.

The change has been driven by labour market arbitrage, the move of work from high cost labour markets to low cost ones. That this should be a feature of legal services should not come as a surprise when one considers the multi-faceted nature of legal work, much of which can be performed by people outside any given jurisdiction. Legal Process Outsourcers ('LPOs') like Pangea3, Yerra, and

16 Unless, of course, they train their graduates to operate effectively in the new legal services market described in this article. See below Part IV.

17 See below Part IV.

18 See below Part V.

19 See, eg, Ronald W Staudt and Andrew P Medeiros, 'Access to Justice and Technology Clinics: A 4% Solution' (2013) 88(3) *Chicago-Kent Law Review* 695, 696; Richard Susskind and Daniel Susskind, *The Future of the Professions: How Technology Will Transform the Work of Human Experts* (Oxford University Press, 2015).

20 For sure, public international law has been a feature of the law school curriculum for a long time; but this is a narrow specialisation that offers few jobs, and matters little to the vast majority of law graduates and to very few lawyers on a per capita basis.

Integreon have been major players in legal services for more than a dozen years, shipping legal work such as litigation document review, contract management and mergers and acquisitions-based due diligence review to low cost countries like India, Bangladesh, the Philippines and South Africa.[21] These are already enormous businesses: Pangea3 began as a start-up in 2004, and was sold to Thomson Reuters in 2010 for $100 million and then resold to EY early last year for much more.[22] Another large provider, Axiom, after spinning off two of its business lines and considering an IPO, ultimately received an undisclosed capital investment from global private equity firm Permira in October 2019.[23]

Labour market arbitrage is a relentless driver of change within legal departments in developed countries, despite regulatory prohibitions on the unlicensed practice of law or fee-splitting with non-lawyers.[24] Since legal services are knowledge products that can easily be delivered virtually, the internet has driven a huge change in the way in which legal needs can be met by offshore providers. As Bill Henderson wrote five years ago:

> Virtually everything up until the courthouse door or the client-counselling moment can be disaggregated and turned into a process or product delivered by a nonlawyer vendor adept at technology and systems engineering. Because there is so much money to be made by the application of technology and process to legal problems, the nonlawyer genie is not going back into the bottle. It is time to accept that fact.[25]

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21 Jayanth K Krishnan, 'Outsourcing and the Globalizing Legal Profession' (2007) 48(6) *William and Mary Law Review* 2189 discusses the increased outsourcing of American legal work to India by 2007; Milton C Jr Regan and Palmer T Heenan, 'Supply Chains and Porous Boundaries: The Disaggregation of Legal Services' (2010) 78(5) *Fordham Law Review* 2137 examines law firm decisions to rely on suppliers outside their jurisdiction to provide legal services; David A Steiger, 'The Rise of Global Legal Sourcing: How Vendors and Clients Are Changing Legal Business Models' (2009) 19(2) *Business Law Today* 39, 39; Aesha Datta, 'Fresh Law Grads Find Yet Another Avenue in Legal Process Outsourcers', *The Hindu Business Line* (online, 11 May 2012) <http://www.thehindubusinessline.com/industry-and-economy/article3408624.ece?ref=wl opinion>.

22 Anuj Agrawal, 'In Conversation: Sanjay Kamlani and David Perla, Co-CEOs of Pangea3', *Bar and Bench* (online, 27 June 2012) <https://barandbench.com/conversation-sanjay-kamlani-and-david-perla-co-ceos-pangea3/> reported on the growth of the LPO from a start-up in 2004 to 850 lawyers currently and projected growth of 40–60% per year; Archana Rai, 'Sequoia Nets Big Money in Pangea3 Sale to Reuters', *The Economic Times* (online, 25 November 2010) <https://economictimes.indiatimes.com/industry/banking/finance/sequoia-nets-big-money-in-pangea3-sale-to-reuters/articleshow/6984939.cms?from=mdr>; Frank Ready, 'EY Eyes Continued Legal Services Growth with Pangea3 Acquisition', *Law.com* (online, 5 April 2019) <https://www.law.com/legaltechnews/2019/04/05/ey-eyes-continued-legal-services-growth-with-pangea3-acquisition/>.

23 Roy Strom, 'Lawyer Staffing Firm Axiom Takes PE Money, Drops IPO Plans', *Bloomberg Law* (online, 6 September 2019) <https://news.bloomberglaw.com/us-law-week/lawyer-staffing-firm-axiom-takes-pe-money-drops-ipo-plans>; 'Permira Funds Complete Investment in Axiom', *Permira* (Web Page, 1 October 2019) <https://www.permira.com/news-views/news/permira-funds-complete-investment-in-axiom/>.

24 See, eg, American Bar Association, *Model Rules of Professional Conduct* (at August 2018) r 5.4 which prohibits business combinations between lawyers and non-lawyers when any portion of the business involves the practice of law.

25 Bill Henderson, 'A Summer Graduate School for E-Discovery', *The Legal Whiteboard* (Blog Post, 31 May 2013) <https://lawprofessors.typepad.com/legalwhiteboard/2013/05/a-summer-school-for-e-discovery.html>.

Some of these LPOs have a lawyer as figurehead to comply with licensing requirements; but in many of these businesses there may only be a small number of jurisdictionally-licensed lawyers, overseeing thousands of outsourced paralegals. This obviously changes the number of locally-licensed lawyers needed to service a given amount of legal needs in the developed country; even as it increases the employment prospects of offshored lawyers in countries like India, South Africa, and the Philippines.[26]

The development of LPOs also means that the skillset of the local lawyers working within the organisation are very different from those needed to work in a local law firm. Law schools rarely consider this. It is an unusual school indeed that offers an elective in legal technology or leadership, although this is becoming more common. However, we are yet to find a single law school which offers serious training in project management, financial accounting, human resources, marketing, and management, along with subjects in legal innovation, how to create a start-up, LPO management, or the virtualisation of law. According to the CEO of one alternative legal service provider, 'Net Promoter Score' is the most important metric in legal services, but it is a rare law school indeed that teaches how to calculate it or why it is important.[27]

IV MANAGED LEGAL SERVICES AND LEGAL OPS

The third and final example of change that has already impacted the profession is the rise of managed legal services and legal operations. These are two sides of the one coin. Legal operations – or 'legal ops' as it is often called – occurs where corporate legal departments manage their costs by a mixture of technology and specialists in procurement, management, and accounting. Managed legal services are the flip side, involving corporate legal departments shifting their spending from purchasing costly customised advice from law firms to using low cost, technology-enabled, and process-driven external providers for significant parts of their legal needs.[28]

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26 Datta (n 21).

27 Lachlan McKnight, 'Observations on NewLaw in Australia in 2018', *Lawyers Weekly* (online, 27 December 2018) <https://www.lawyersweekly.com.au/newlaw/24712-observations-on-newlaw-in-australia-in-2018>:

> In my view, one of the most significant and welcome changes we're going to see in the legal services industry over the next five years is a revolution in customer service … To give some context, Net Promoter Score (NPS) is THE most important business metric at LegalVision. We measure it rigorously and are obsessed about maintaining an NPS or [sic] around 70.

28 See John S Dzienkowski, 'The Future of Big Law: Alternative Legal Service Providers to Corporate Clients' (2014) 82(6) *Fordham Law Review* 2995, 3010, who describes the nature of managed legal services firms. The term 'alternative legal services' is sometimes used synomymously with 'managed legal services' and 'NewLaw'. The term 'alternative legal services' is a bad one, in part because it characterises legal practice within firms as the 'normal' delivery model. More importantly, there are a huge number of ways of delivering legal services that are 'alternative', and the expression 'managed services' better captures the process-engineering model that is at the core of this type of delivery. For a discussion of managed services, see David B Wilkins and Maria J Esteban, 'Taking the "Alternative" out of Alternative Legal Service Providers' in Michele DeStefano and Guenther Dobrauz-Saldapenna (eds),

The development of managed legal services firms is closely connected with the development of LPOs, discussed above.[29] Providers like Pangea3 began using low cost offshore lawyers as a way of helping legal departments control their costs,[30] but increasingly these companies have moved beyond labour market arbitrage and now look to process engineering, technology, and low cost, non-legally trained contract labour to improve the general counsel's bottom line. These providers are doing legal work that otherwise would be handled by lawyers.[31]

An indication of the scale and success of managed services providers can be seen in the UnitedLex-GE announcement in March 2018. UnitedLex agreed to take on GE's document review and e-discovery work for a deal reputedly worth USD100 million per annum. As a result, private equity firm CVC Capital Partners acquired a majority stake in UnitedLex for USD500 million in September 2018.[32] Or consider managed services provider, Elevate. It was founded in 2011, grew 25% year on year, and recently acquired five companies within three months – including compliance specialist Cognatio, managed services provider Yerra Solutions, and legal AI company LexPredict – in order to service its clients' disparate legal needs.

Managed services firms have been notable players in the legal services market for about the last decade, and have been steadily taking market share from law firms for at least the last five years.[33] However, the pace of change has accelerated recently with the new emphasis on legal operations, and the re-emergence of the Big Four audit firms as players in the legal arena. On the first aspect, the Corporate Legal Operations Consortium ('CLOC') was founded in 2010 by Connie Brenton, an in-house lawyer who was working in technology.[34] Initially a small interest group – some early participants described it as a 'book club' whose members could fit in a meeting room – it has grown quickly and now boasts over 2,300 members, from over 1,100 companies in 45 countries, with annual conferences in three countries.[35] Legal operations specialists now control legal spending across a huge range of companies, focused on reducing costs and cutting the number of lawyers who work on matters.

New Suits: Appetite for Disruption in the Legal World (Stäempfli Verlag, 2019) ch 1 <https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3379056>.

29 See above Part III.

30 Bruce MacEwen, 'A Conversation with Mark Harris of Axiom', *Adam Smith, Esq* (Blog Post, 6 August 2012) <https://adamsmithesq.com/2012/08/a-conversation-with-mark-harris-of-axiom/>.

31 See Roy Strom, 'Is UnitedLex the Future? Dan Reed Thinks So', *The American Lawyer* (online, 7 January 2019) 2 <https://www.unitedlex.com/assets/news/The-American-Lawyer-Is-UnitedLex-the-Future-January-2019.pdf> ('Is UnitedLex the Future?'); Bruce MacEwen, 'Don't Fight the Tape', *Adam Smith, Esq* (Blog Post, 21 September 2018) <https://adamsmithesq.com/2018/09/dont-fight-the-tape/>.

32 See Strom, 'Is UnitedLex the Future?' (n 31). UnitedLex also says 'it inked deals worth an eventual $1.5 billion in revenue in a recent 18-month period': at 1; see also MacEwen, 'Don't Fight the Tape' (n 31).

33 William D Henderson, 'From Big Law to Lean Law' (2014) 38 *International Review of Law and Economics* 5, 11: 'The simple math of 50% market growth suggests LPOs are taking market share from firms'; MacEwen, 'Don't Fight the Tape' (n 31).

34 Reena SenGupta, 'Legal Operations: The Disruptive Ambitions of Smooth Operators', *Financial Times* (online, 21 June 2017) <https://www.ft.com/content/61294270-4567-11e7-8d27-59b4dd6296b8>.

35 Corporate Legal Operations Consortium, 'What Is Legal Operations?' (Guide, Corporate Legal Operations Consortuym, October 2019) 11 <https://cloc.org/wp-content/uploads/2019/10/What-is-Legal-Ops_Oct2019-FINAL.pdf>.

On top of this change, the Big Four audit, accounting and consulting firms – Deloitte, EY, KPMG and PwC – are also changing the market for legal services. After an unsuccessful initial foray into BigLaw a decade or more ago, they have repositioned their multidisciplinary practices. Not only do they all include legal practices that work with the other consulting groups within their partnerships,[36] but a number of them also have 'NewLaw' groups that incorporate managed legal services as part of their offering to large corporate legal departments. For example, in 2018 EY bought Riverview Law, a managed legal services provider, and as mentioned earlier, in 2019, snapped up Pangea3.[37] In 2019 PwC appointed Mick Sheehy, previously a general counsel of Telstra, as a partner to create a NewLaw group, and is busily acquiring customers for its managed legal services.

What does this change mean for the legal profession? The rise of a new style of multidisciplinary practice by the Big Four is a significant stress for BigLaw firms, who will increasingly operate within a more challenging landscape, competing for high value work from large companies. We should expect that legal practices within the Big Four will increase in size, and elite law firms will correspondingly shrink or not expand as much as they would have otherwise. Other types of legal practices will probably be largely unchanged, since they do not compete at the highest end of the market. For law schools the rise of the Big Four will create small ripples, since there should not be much of a change in the net numbers of law graduates needed to service the work – it should not matter much whether a law school's best graduates go to BigLaw or the Big Four. Of course, at the margin, some law schools will gain a benefit by positioning their graduates for work within the Big Four's multidisciplinary practices, by giving them skills in working in cross-collaborative teams and by giving them skills in finance, tax, project management, accounting and so forth. This will certainly assist relative outperformers – both schools and students – in taking opportunities from their competitors; but the overall effect on the market for lawyers is likely to be small.

On the other hand, the implications of legal ops and managed services pose a much more vexing issue for the profession. All commercial law firms will see an impact. Any firm whose clients are large or medium-sized corporates should expect to see a significant reduction in billings, as managed services firms start taking away this business from lawyers who only do complex legal work. At the top end, however, elite firms should suffer less, as the bet-the-company transactions and lawsuits will still go to elite firms like King & Wood Mallesons,

36 See, eg, Sol Dolor, 'KPMG Law's New Service Helps Remake In-House Legal Departments', *Australasian Lawyer* (Blog Post, 3 August 2018) <https://www.australasianlawyer.com.au/news/kpmg-laws-new-service-helps-re-make-inhouse-legal-departments-253169.aspx>; David B Wilkins and Maria J Esteban Ferrer, 'The Integration of Law into Global Business Solutions: The Rise, Transformation, and Potential Future of the Big Four Accountancy Networks in the Global Legal Services Market' (2018) 43(3) *Law and Social Inquiry* 981.

37 EY, 'EY Expands Global Legal Managed Services Offering with Acquisition of Riverview Law' (Press Release, 7 August 2018) <https://www.ey.com/en_eg/news/2018/08/ey-expands-global-legal-managed-services-offering-with-acquisition-of-riverview-law>; EY, 'EY to Expand Legal Services Offerings Globally with Acquisition of the Pangea3 Business from Thomson Reuters' (Press Release, 3 April 2019) <https://www.ey.com/en_ua/news/2019/04/ey-to-expand-legal-services-offerings-globally-with-acquisition-of-the-pangea3-business-from-thomson-reuters>.

Allens Linklaters, MinterEllison, and the like. However, a great deal of routine legal work will migrate to managed services firms, as will most regulatory compliance work. This is the sort of work that is typically handled by medium-sized commercial law firms, and firms like this should expect to struggle in a legal market attacked by managed legal services firms.

For law schools, the change is also serious. Managed services providers rely on technology and non-legal workers to fulfil legal service needs, and employ only a small number of lawyers in managerial and oversight roles.[38] This will mean that fewer lawyers will be needed to service the same amount of legal work; an observation which translates to a reduced need for law graduates. Again, forward-thinking law schools can be relative outperformers by teaching their students the kinds of skills and knowledge that legal ops and managed legal services firms need. We should therefore expect to see some deans of law schools adjusting their curricula accordingly. Helpfully, CLOC specifies the twelve core competencies that it suggests legal operations people should possess, including, inter alia, organisational design, vendor management, information governance, data analytics, and strategic planning.[39] No law school in Australia has yet mapped these skills onto its curriculum, and so any law school dean seeking to provide their graduates with a competitive advantage in the new legal services world can easily consult the CLOC website for a roadmap.

V LEGAL PLATFORMS AND LEGAL UBERISATION

The future of the law firm does not look like its past. To understand why, we need to understand the contributions of Adam Smith, Ronald Coase, and Travis Kalanick.

Adam Smith, the Scottish moral philosopher, revolutionised – or indeed, invented – classical economics with his magisterial *An Inquiry into the Nature and Causes of the Wealth of Nations*.[40] In it he demonstrated, inter alia, how the invisible hand of the market could coordinate prices, to the benefit both of society and the individual entrepreneur. In his famous pin-making example, he further showed how the division of labour, and its effective coordination within a firm, would increase productive capacity.[41]

It was no accident that Smith's insight into the importance of the division of labour came at the beginning of the Industrial Revolution. Industrialisation created the basis for factory production of numerous types of products: a chair that previously took an artisan weeks to craft, could be made in a factory in hours. The division and specialisation of labour drove greater productivity and economic prosperity, but also required coordination: someone had to arrange for the wood to

38 Of course, the distinction is not clear, as many managed services firms will also use offshoring to fulfil the need, see Part IV above. But for the sake of explanation, there is a distinction here between LPOs which necessarily use offshore labour and managed service firms which do not.

39 'What Is Legal Operations?', *CLOC* (Web Page, 2019) <https://cloc.org/what-is-legal-operations/>.

40 (W Strahan and T Cadell, 1776).

41 Ibid 5–8.

be delivered, someone had to hire the furniture-makers, someone had to oversee the books, someone had to do the marketing, and so on.[42] The firm was the natural response to this coordination problem, and what we think of today as the business school discipline of 'management' emerged from the industrial era to ensure coordination of all the functions within the firm.[43]

The core question that Ronald Coase developed more than a century later from Smith's description of the firm – which transactions are more efficiently conducted in a firm than in a market?[44] – is at the heart of the changes examined in the previous Parts of this article. The development of managed legal services, legal operations directors, NewLaw providers, LPOs, new legaltech providers, and commodification of legal services are all, in their own ways, responses to this question. Many of the new entrants to the legal services market are trying to remove the law firm from the coordination function of meeting legal needs.

Which brings us to Travis Kalanick, the high-profile founder of Uber. Until recently, the only significant economic coordination mechanisms were the firm and the market. However, the success of car-sharing start-ups, room-renting platforms like Airbnb, bike sharing companies like Ofo or Jump, and the recent proliferation of electric scooter start-ups like Bird and Lime, have demonstrated the ability of technology platforms to perform coordination functions that were, until recently, the province of the firm or the market. Before the emergence of Lyft, Didi Chuxing, and Uber, if you wanted a ride from your home to the airport you were reliant on a taxi company to coordinate the hiring and training of drivers, the purchase and licensing of the cars, the development of the communications infrastructure, coordinating your booking, accepting payment, and so on. Now, Uber uses a technology platform comprising mobile phones, the internet, a database, and numerous non-professional drivers (as contractors) to coordinate all of these functions and ensure that you get to your flight on time. Although these providers are sometimes thought of as emblematic of the 'sharing economy,' platform technology companies are better thought of as service delivery providers who use non-firm coordination mechanisms to bring together supply (that they do not own) with demand (that they do).

What then does this have to do with the future of the law?[45] Imagine a platform that allows clients to engage a well-known lawyer who controls the client relationship and who can – via a platform – immediately assemble a team of lawyers to serve the legal service need. The lawyers are recruited on a freelance basis, based on their experience and reputation – again, controlled through the platform – to work on the transaction or case. Of course, all of the communication, backend processing, and documentation will be managed through the platform.

42 Amartya Sen, 'Uses and Abuses of Adam Smith' (2011) 43(2) *History of Political Economy* 257, 259.

43 Smith's interest in the firm was tangential, and it was not until around 150 years later that Coase took up Smith's basic outline of the process of coordination and asked the core question: make or buy? In doing so, he created the theory of the firm, one of the most important economic principles of modern times. See Ronald Coase, 'The Nature of the Firm' (1937) 4(16) *Economica* 386.

44 Ibid.

45 For a slightly different analysis of this trend, viewed from the perspective of existing NewLaw/ALSP firms, see Margaret Thornton, 'Towards the Uberisation of Legal Practice' (2019) 1(1) *Law, Technology and Humans* 46.

Lawyers will use the platform to report to the client and the rainmaker lawyer will see all manner of analytics about the effectiveness and timeliness of the legal work, the effectiveness of the lawyers involved, and so on. In this scenario, costs to the client can be lower since there will be no need for the high overheads that we see in firms: no premium office rent, no large foyers, no marble reception desk, no leather chairs. At the same time, income for the client-controlling lawyers can be higher; again, because of low fixed overheads and reduced staffing costs. It is also possible that the freelance lawyers can be better paid than currently, assuming the platform or client-controlling lawyer is motivated to pass on the profits.[46]

How likely is this type of platform-based future for law? It seems very likely when one considers that the three main features necessary to make platforms work are already present in the marketplace; these are back office technologies, flexible workforces, and rating systems.

At present, all of the back office work of a law firm can be performed by technology providers: Xero or MYOB are used for accounting and invoices, Microsoft Office and NetDocuments are used for document creation and management, Google Sheets handles data analysis, etc. We are long past the point where firms need to have large numbers of administrative support staff to make the office run effectively. Outsourcing of these functions has already occurred, and although there are some interesting questions about how this will be delivered in future, the technology already exists to make this work.[47]

In the managed legal services and LPO environment, we see the makings of the flexible legal workforce model. Many of the big managed legal providers – Axiom, most notably – began life as flexible workforce providers for large companies. Recently, a number of law firms have gone down a similar route by creating low cost legal workforce providers. Examples of these include Corrs Chambers Westgarth's offering called *Orbit*, Pinsent Masons's *Vario*, and MinterEllison's *Flex*.

We also see emerging examples of the reputation/experience management and rating systems, which is the last piece of the puzzle necessary to make a legal platform provider a reality. LinkedIn, for example, provides details of experience and work history, along with a peer-based recommendation system for certain skills.[48] Although it is currently a general purpose platform, and not optimised for law, it certainly demonstrates the technology is available to recommend legal skills, experience, and reputation to employers. Within the legal services space in the United States, Avvo allows clients to report back on the quality of the work performed by their lawyers. It is easy to see them branching out into rankings and reporting for internal legal expertise.[49]

The implications of these kinds of platforms within law are significant. We should expect to see the rise of independent legal contractors doing the kind of

46 Although, of course, this has not been the case with Uber or many of the other platform providers.

47 The two most interesting questions are: (1) Who is going to win the battle to provide these services to lawyers? and (2) Will it be one integrated platform provider, or multiple providers working together through APIs?

48 *LinkedIn* (Web Page) <https://au.linkedin.com>.

49 'About Avvo', *Avvo* (Web Page) <https://www.avvo.com/about_avvo>.

work that law firms used to do exclusively. This will reduce the number of law firms, across the spectrum of legal practice. Platform technology probably will not hollow out the ranks of the small high street legal practice; but they are likely to shrink the number of firms across the mid-tier, large, and elite ranks, since a measurable percentage of their work will migrate to the platform and the freelancers who work within it.

We can also expect that better managed firms will use platforms to reduce their payrolls. Firms currently have to staff permanently on the basis of expected peak load, since it is impossible to recruit, onboard, and train lawyers at short notice when demand spikes.[50] Using a legal staffing platform, firms will be able to staff permanently for a minimal day-to-day staffing requirement, and use the platform to ramp up quickly at short notice when spikes happen.

Platform technologies will affect the employment expectations of graduates, since they are likely to work more and more within a 'gig economy' framework.[51] They should not expect to work their way up from document review to the corner office, because there will not be a corner office. There will be rainmakers sitting in mansions, and a large number of supporting lawyers working freelance in co-working spaces like WeWork. As a result of this, law schools should be thinking about the kinds of career and employment skills that they need to impart to their students in an era when widespread casualisation of legal work is the reality. Schools will need to teach students how to network, engage in flexible work arrangements, develop an entrepreneurial mindset and have a personal brand. In time, these skills may be as important as mastery of the Priestley 11. If schools do not teach their students these skills they will not survive.

As a sidenote, it is interesting to note that the Bar is one area of the profession that is unlikely to be much affected by legal platforms. Barristers already work within a framework of individualised, casual, contract-based labour, with an outsourced provider, their clerks, who undertake back office administrative processing. For hundreds of years they have voluntarily operated within a set of strictures and financial realities that legal platforms are going to impose on the remainder of the profession. Although the Bar is often seen to be anachronistic,[52] it is, perhaps, the part of the profession which is best placed to weather the

50 Of course, another way that firms handle workload spikes is to make their lawyers work long hours. This regrettable practice will probably never go away, but there is evidence that the culture is starting to shift – a catalysing event was the recent Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry which created a series of scandals from overworked junior lawyers, see Anthony Cheshire, 'The Bar under Stress' (Autumn 2019) *Bar News* 6, 7. In any event, a platform allows for an even leaner workforce, even assuming that some firms continue to work lawyers into early graves.

51 A large number of graduates are already subject to casualisation of employment, see Strom, 'Is UnitedLex the Future?' (n 31) 2, describing how DXC Technology rebadged/outsourced its in-house legal department to UnitedLex and 'was planning, with the help of UnitedLex, to roll out a kind of Task-Rabbit model (think: gig economy) whereby lawyers, as independent contractors, would negotiate the company's contracts on an ad hoc basis – from their homes, or the nearest coffee shop'.

52 See, eg, Simon Akam, 'The Exquisitely English (and Amazingly Lucrative) World of London Clerks', *Bloomberg* (online, 23 May 2017) <https://www.bloomberg.com/news/features/2017-05-23/the-exquisitely-english-and-amazingly-lucrative-world-of-london-clerks>.

platform-based changes to legal services. There are already some indications that the Bar is moving towards more virtual methods of working.[53]

One substantive change to the Bar is possible, however, and is indeed quite likely. Legal platform technologies could easily take over the function of the clerk, at lower cost and with greater utility. This kind of 'virtual barrister's clerk' would answer many of the perennial complaints rendered by barristers against their clerks, that they provide poor value for money, or do not acquire the best briefs, and so on. It is an open question whether the relevant authorities within the Bar will want to invest in a barrister's platform, and there are many political reasons why they may choose not to do so.

In summary, then, platform technologies are likely to make very significant changes to the way that law is practised in the coming decade. The other technology which also promises to change the profession is AI. As will be seen from the next Part, although many commentators suggest that AI will transform the profession, in fact its effect will be quite attenuated.

VI ARTIFICIAL LEGAL INTELLIGENCE

AI is a venerable discipline within computer science, born in 1956 at a conference at Dartmouth College.[54] The subdiscipline of AI and law is nearly as old, starting at least as early as 1971[55] and operating continuously as a field since then, albeit with alternating periods of excitement and disillusionment.[56] The first highpoint for AI and law was during the eighties and nineties, a period of enormous apparent promise where researchers worked on legal expert systems that they hoped might provide legal advice that was cheaper, faster, and less prone to error than that of human lawyers.[57] The technology of the day involved what are called

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53 An example of virtual clerking can be found in the *Clerks Room* (Web Page) <https://www.clerksroom.com/>.

54 Stuart J Russell and Peter Norvig, *Artificial Intelligence: A Modern Approach* (Pearson Education, 2nd ed, 2003) 17, calls this conference the 'birth of artificial intelligence'.

55 McCarty (n 8) 837: 'The work on this project was begun while the author was a Law and Computer Fellow at the Stanford Law School, 1971–1973'. Layman Allen at Yale Law School – and later Michigan – has demonstrated the application of formal logic systems to the drafting of legal language, as early as 1957, although he did not use automated reasoning systems, see, eg, Layman E Allen, 'Symbolic Logic: A Razor-Edged Tool for Drafting and Interpreting Legal Documents' (1957) 66(6) *Yale Law Journal* 833; Layman E Allen and Gabriel Orechkoff, 'Toward a More Systematic Drafting and Interpreting of the Internal Revenue Code: Expenses, Losses and Bad Debts' (1957) 25(1) *University of Chicago Law Review* 1. There was a flowering of early interest in symbolic logic during the mid part of the 1970s: see, eg, Walter G Popp and Bernhard Schlink, 'Judith: A Computer Program to Advise Lawyers in Reasoning a Case' (1975) 15(4) *Jurimetrics Journal* 303; Thomas Haines Edwards and James P Barber, 'A Computer Method for Legal Drafting Using Propositional Logic' (1975) 53(5) *Texas Law Review* 965. For a comprehensive account of the history of the AI and Law movement, including the rise of symbolic logic systems, see Hunter, 'Representation and Reasoning in Law' (n 9).

56 See Trevor Bench-Capon et al, 'A History of AI and Law in 50 papers: 25 Years of the International Conference on AI and Law' (2012) 20(3) *Artificial Intelligence and Law* 215.

57 Representative examples of the research of the time include: MJ Sergot et al, 'The British Nationality Act as a Logic Program' (1986) 29(5) *Communications of the ACM* 370; Alan L Tyree, Graham Greenleaf and Andrew Mowbray, 'Legal Reasoning: The Problem of Precedent' in JS Gero and R Stanton (eds),

'symbolic' systems; ones that rely on the symbolic representation of legal rules and cases that can be manipulated by various types of reasoning algorithms.

However, early excitement in AI and law waned, as symbolic systems failed to live up to the hype. In part this was caused by some difficult jurisprudential problems: arcane debates on the limits of HLA Hart's 'core and penumbra' model of law, or arguments about whether legal concepts are as radically indeterminate as postmodernists like Stanley Fish claimed, are very concrete when you have to code them into a machine.[58] Also, the early adoption of law by high profile logic programmers also caused some path-dependent difficulties.[59] But the 'second AI winter'[60] that lasted from the late 1990s until about 2010 wasn't confined to legal applications of AI, and came about largely as a response to the brittleness of symbolic systems, and the perception that AI was not creating anything that could really be called 'intelligent'.[61]

Of course, these days there is an enormous amount of excitement and hype around AI. This is almost entirely due to the remarkable advances that have been made in one technology: deep neural networks, or 'deep learning' as it is often called.[62] Although artificial neural networks have been around almost since the beginning of AI,[63] the field exploded in 2012 when Krizhevsky, Sutskever, and

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Artificial Intelligence Developments and Applications (Elsevier Science Publishers, 1988) 231; TJM Bench-Capon (ed), *Knowledge-Based Systems and Legal Applications* (Academic Press, 1991).

58 Hunter, 'Representation and Reasoning in Law' (n 9); Richard Susskind, *Expert Systems in Law: A Jurisprudential Inquiry* (Oxford University Press, 1987).

59 Ending up, as machine learning folks would say, in a suboptimal local minimum. A neat history is given in Philip Leith, 'The Rise and Fall of the Legal Expert System' (2010) 1(1) *European Journal of Law and Technology*.

60 The first AI winter came after the initial flush of success during the 1960s waned. The start of this first winter is often ascribed to the stinging conclusions of the United Kingdom's Lighthill Report, delivered in 1973: James Lighthill, 'Artificial Intelligence: A General Survey' in BH Flowers (ed), *Artificial Intelligence: A Paper Symposium* (Science Research Council, 1973) pt I.

61 This perception can be partly attributed to the old observation – as my AI professor noted many decades ago – that one common definition of AI is 'anything that computers can't do yet'. Because if they can do it, then it is just something that a mere computer can do; and since we understand how computers work, they're not *really intelligent*. But the observation, flippant though it may have been, explains some of the recent hype about machine learning systems. These systems appear remarkably intelligent to us, in part because they are black boxes that cannot explain themselves, and they often make decisions that are unlike human reasoning. Confronted with AlphaGo's winning move 37 in game two against Lee Sedol, or AlphaZero's play in game ten against Stockfish, we are left wondering about the new type of intelligence displayed, as we ponder 'no human would come up with that move' and ask 'how on earth did it come up with that move?' See Steven Strogatz, 'One Giant Step for a Chess-Playing Machine', *The New York Times* (online, 26 December 2018) <https://www.nytimes.com/2018/12/26/science/chess-artificial-intelligence.html>; Cade Metz, 'How Google's AI Viewed the Move No Human Could Understand', *Wired* (online, 14 March 2016) <https://www.wired.com/2016/03/googles-ai-viewed-move-no-human-understand/>.

62 Yoshua Bengio, 'Learning Deep Architectures for AI' (2009) 2(1) *Foundations and Trends in Machine Learning* 1. For a general review, see, eg, Gideon Lewis-Kraus, 'The Great AI Awakening', *Magazine, The New York Times* (online, 14 December 2016) <https://www.nytimes.com/2016/12/14/magazine/the-great-ai-awakening.html>.

63 Frank Rosenblatt, *The Perceptron: A Perceiving and Recognizing Automaton* (Cornell Aeronautical Laboratory Report No 85-460-1, January 1957) 1 <https://blogs.umass.edu/brain-wars/files/2016/03/rosenblatt-1957.pdf>; F Rosenblatt, 'The Perceptron: A Probabilistic Model for Information Storage and Organization in the Brain' (1958) 65(6) *Psychological Review* 386; See 'Perceptron', *Wikipedia* (Web Page, 9 June 2020) <https://en.wikipedia.org/wiki/Perceptron>.

Hinton demonstrated remarkable results in image classification and object recognition using large-scale multi-layer, deep networks,[64] based on Yann LeCun's earlier seminal work on convolution.[65] At that point, the combination of huge computational power and large datasets made machine learning practical, accurate, fast, and relatively inexpensive. Deep learning was suddenly front page news,[66] and the hype has not diminished since then.[67]

In order to understand the significance of deep learning to law, it is important to have a basic idea of how these types of approaches work.[68] At its core, deep learning is a statistical method for classifying patterns, based on large amounts of sample data, using neural networks with multiple layers.[69] The networks are constructed with input nodes connected to output nodes via a series of 'hidden' nodes, arranged in a series of layers. The input nodes can represent any data – in the examples of image recognition and speech recognition they involve pixels or words – and the outputs involve the decision or coding that the researcher is looking to classify, for example, the picture classification or the meaning of the sentence. All of the nodes (or 'neurons') within the network have activation levels, so that a neuron will 'fire' if the nodes connected to it add up to a certain activation level or higher. All of the connections initially have a random weighting assigned to them, but, by using a large training set and a process called back-propagation, eventually the activation levels and weighting are adjusted, to the point where any given input will produce the correct output.[70]

A simple example may assist. Imagine that we have a dataset that provides historical data on every sentencing decision for all criminal defendants in a given

64 Alex Krizhevsky, Ilya Sutskever and Geoffrey E Hinton, 'ImageNet Classification with Deep Convolutional Neural Networks' (Conference Paper, International Conference on Neural Information Processing Systems, December 2012). Similar work was being undertaken elsewhere: Dan Cireşan et al, 'Multi-Column Deep Neural Network for Traffic Sign Classification' (2012) 32 *Neural Networks* 333. The seminal review by the leaders in the field is Yann LeCun, Yoshua Bengio and Geoffrey Hinton, 'Deep Learning' (2015) 521(7553) *Nature* 436.

65 Yann LeCun, 'Generalization and Network Design Strategies' (Technical Report No CRG-TR-89-4, University of Toronto, June 1989). The third genius behind the development of deep learning was Yoshua Bengio, and recently he, Hinton, and LeCun were given the ACM's Turing Award, the 'Nobel Prize of Computing': '2018 ACM AM Turing Award', *AM Turing Award* (Web Page) <https://amturing.acm.org/2018-turing-award.cfm>.

66 John Markoff, 'Scientists See Promise in Deep-Learning Programs', *The New York Times* (online, 23 November 2012) <https://www.nytimes.com/2012/11/24/science/scientists-see-advances-in-deep-learning-a-part-of-artificial-intelligence.html>.

67 See, eg, Lewis-Kraus (n 62).

68 To be sure, there are a number of other connectionist approaches that differ somewhat from the supervised network described here – notably unsupervised and reinforcement algorithms. Yet, all of them are dependent on large datasets which generally present a set of inputs and outputs, and they all operate in ways that are similar enough within the legal domain that the differences need not detain us. For a detailed analysis of some of the general problems with deep learning and machine learning approaches see Gary Marcus, 'Deep Learning: A Critical Appraisal' (Discussion Paper, New York University, 2 January 2018).

69 The multiple layers are the reason these approaches are called 'deep' learning.

70 In a process called 'gradient descent'. For a technical description of the process, see Ian Goodfellow, Yoshua Benjio and Aaron Courville, *Deep Learning* (MIT Press, 2016) <https://www.deeplearningbook.org/>; Francois Chollet, *Deep Learning with Python* (Manning Publications, 2017).

jurisdiction. This dataset contains all of the salient factors to the sentencing decision – the presence of mitigating factors like contrition or juvenile status, the presence of aggravating factors like recidivism or violence, the name of the judge, the nature of the crime etc, along with the eventual sentence given for each case. The dataset can also contain some (presumably) irrelevant considerations – for example, the time of day of the decision, the colour of the defendant's clothes, and so on.[71] For any case that the system learns about, the sentencing factors are the inputs on the network, and the sentencing determinations are the outputs. The network is initially coded with random activations and weightings, and so it cannot predict accurately the outcome of any case. But if we train it with hundreds of cases – or better, hundreds of thousands of cases – where we know the factors and the sentences, we will eventually have a fully trained network where the outcome of an undecided case can be predicted accurately based on the presence or absence of various factors.[72]

Deep neural networks have made good on the promise that one day machines would be able to learn. The areas where we see this most obviously are in machine vision and speech, and the headline applications of this are self-driving cars, voice recognition systems, speech production, and game playing. Other advances in semantic representation and analysis have tied neural networks to data systems like the web or music databases, and given us the miracle of Google's Pixel Buds earphones translating language on the fly, or Amazon's Alexa queuing up The National's 'Light Years' when one says, 'Alexa, play some music that I like'.

Although there are any number of dire prognostications about the impact of deep learning on legal practice,[73] in the foreseeable future the effects on the legal profession will be fairly minimal. Machine learning techniques are already commercially available in technology assisted document review (aka 'predictive

71 This article is not the place to seek to resolve the many issues that emerge about the use of data-driven systems that may encode discrimination within the dataset. See, eg, Danielle Keats Citron, 'Technological Due Process' (2008) 85(6) *Washington University Law Review* 1249; Sonja B Starr, 'Evidence-Based Sentencing and the Scientific Rationalization of Discrimination' (2014) 66(4) *Stanford Law Review* 803, 806; Danielle Keats Citron and Frank Pasquale, 'The Scored Society: Due Process for Automated Predictions' (2014) 89(1) *Washington Law Review* 1; Frank Pasquale, *The Black Box Society: The Secret Algorithms That Control Money and Information* (Harvard University Press, 2015). But 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; Harry Surden, 'Ethics of AI in Law: Basic Questions' in Markus D Dubber, Frank Pasquale and Sunit Das (eds), *The Oxford Handbook of Ethics of AI* (Oxford University Press, 2020) 719.

72 In theory, deep learning systems are powerful enough to represent any finite deterministic classification between any set of inputs and corresponding outputs. However, there are a range of real world issues that place practical limitations on deep learning techniques, including: finite and indeterminate datasets; datasets that present local minima that defeat gradient descent-based algorithms; outcomes that require *extrapolation* from data, not *interpolation* within the data; knowledge that is hierarchically structured; and so forth. For a serious analysis of these and other issues, see Marcus (n 68).

73 See, eg, Dan Mangan, 'Lawyers Could Be the Next Profession to Be Replaced by Computers', *CNBC* (online, 17 February 2017) <www.cnbc.com/2017/02/17/lawyers-could-be-replaced-by-artificial-intelligence.html> and older examples: Joe Palazzolo, 'Why Hire a Lawyer? Computers Are Cheaper', *The Wall Street Journal* (online, 18 June 2012) <https://www.wsj.com/articles/SB10001424052702303379204577472633591769336>; John Markoff, 'Armies of Expensive Lawyers, Replaced by Cheaper Software', *The NewYork Times* (online, 4 March 2011) <https://www.nytimes.com/2011/03/05/science/05legal.html>.

coding' in e-discovery) and in large-scale contract review. Predictive coding is already a widespread, commercial neural net technology: although there are a range of statistical and information retrieval techniques used in these systems, deep learning approaches involve training a neural net on a subset of documents that are known to be relevant to the discovery question, and then letting it categorise the remaining, uncategorised documents.[74] Lawyers check to see how many relevant documents were identified from the test dataset, and using various reinforcement learning techniques, the neural net is retrained and retrained. After numerous iterations, this rinse and repeat cycle will result in a system that is much more accurate and much cheaper than humans, at least for discovery requests over large datasets of potentially discoverable documents.[75]

Similar approaches work in large-scale contract review, a process used commonly in mergers and acquisition due diligence work. Numerous legaltech providers exist in this space,[76] and many of them have demonstrated that they can analyse and classify contractual clauses faster and more accurately than humans.[77] It has to be said that the current systems available have been hamstrung by spotty or small training datasets, especially outside of the large markets where they are trained. But data-centric systems inevitably get better with more data; so, it is only a matter of time before deep learning-based systems are used across the board for contract review.

Outside the field of natural language parsing – the subdiscipline of AI into which both predictive coding and automated contract review fall – various

74 For a discussion on the 'well established and theoretically sound' statistical and technological concepts of e-discovery and predictive coding, as well as a short history of the practice, see Matthew G Kenney, 'The Past, Present and Future of Predictive Coding' (2016) 12(1) *Florida Agricultural and Mechanical University Law Review* 165. For judicial consideration of predictive coding in the discovery process in Australia see *McConnell Dowell Constructors (Aust) Pty Ltd v Santam Ltd [No 1]* (2016) 51 VR 421 and *McConnell Dowell Constructors (Aust) Pty Ltd v Santam Ltd [No 2]* [2017] VSC 640.

75 Charles Yablon and Nick Landsman-Roos, 'Predictive Coding: Emerging Questions and Concerns' (2013) 64(3) *South Carolina Law Review* 633, 646; Daniel Martin Katz, 'Quantitative Legal Prediction – or – How I Learned to Stop Worrying and Start Preparing for the Data-Driven Future of the Legal Services Industry' (2013) 62(4) *Emory Law Journal* 909, 942–7; *Moore v Publicis Groupe*, 287 FRD 182 (SD NY, 2012) accepting computer predictive coding in document review.

76 For example, iManage RAVN, Kira, LawGeex, Luminance and similar natural language parsing systems. See John Flood and Lachlan Robb, 'Professions and Expertise: How Machine Learning and Blockchain Are Redesigning the Landscape of Professional Knowledge and Organization' (2019) 73(2) *University of Miami Law Review* 443, 463.

77 For example a GDPR papering exercise was reduced to seven days from an estimated nine weeks using Luminance AI document review software: see Joshua Oliver, 'Now Young Lawyers Can Sleep While the Robots Work', *Financial Times* (online, 23 October 2019) <https://www.ft.com/content/294d0c1c-d613-11e9-8d46-8def889b4137>. See also the CEO of RAVN's prediction of reducing an employment law related document review matter requiring two lawyers over a one year period to a few days: Julie Sobowale, 'How Artificial Intelligence Is Transforming the Legal Profession', *ABA Journal* (online, 1 April 2016) <https://www.abajournal.com/magazine/article/how_artificial_intelligence_is_transforming_the_legal_profession>. Further, some 5,000 'human processing' work hours were saved using Kira: Kathryn D Betts and Kyle R Jaep, 'The Dawn of Fully Automated Contract Drafting: Machine Learning Breathes New Life into a Decades-Old Promise' (2017) 15(1) *Duke Law and Technology Review* 216, 225. See also Herbert B Dixon Jr, 'What Judges and Lawyers Should Understand about Artificial Intelligence Technology' (2020) 59(1) *Judges' Journal* 36, discussing a study where AI technology was more accurate than human lawyers in reviewing standard business contracts.

machine learning and big data techniques hold out significant promise for lawyers. Both legaltech providers and legal scholars have demonstrated the ability of big data-driven statistical and quantitative techniques to generate useful predictions in legal situations. These include assessments of the quality of an attorney based on their litigation history,[78] the disposition of legal cases in patent litigation and US Supreme Court determinations,[79] and the likely lawyers' costs to be awarded in a range of cases.[80] The success of these systems is evident from the range of the published articles by the creators,[81] the number of paying customers for their technology, and the scale and value of the acquisitions of their companies.[82] And within the criminal justice field, predictive policing and risk assessment systems are very widespread[83] – although the commercial success of data-driven assessment systems like Northpointe's COMPAS, must be balanced against research that questions their accuracy, utility, and fairness.[84]

78 Katz (n 75) 932–4.

79 See Daniel Martin Katz, Michael J Bommarito II and Josh Blackman, 'A General Approach for Predicting the Behavior of the Supreme Court of the United States' (2017) 12(4) *PLOS One* 1, 7–8, which demonstrates the use of a random forest classifier algorithm to predict US Supreme Court decisions with greater accuracy than support vector machines or deep layer neural networks; Andrew D Martin et al, 'Competing Approaches to Predicting Supreme Court Decision Making' (2004) 2(4) *Perspectives on Politics* 761 describes a statistical model of Supreme Court outcomes based upon various factors including the political orientation of the lower opinion and the circuit of origin of the appeal that outperformed experts in predicting Supreme Court outcomes and highlighted data relationships not previously understood; Andrew D Martin and Kevin M Quinn, 'Dynamic Ideal Point Estimation via Markov Chain Monte Carlo for the US Supreme Court, 1953–1999' (2002) 10(2) *Political Analysis* 134; Theodore W Ruger et al, 'The Supreme Court Forecasting Project: Legal and Political Science Approaches to Predicting Supreme Court Decision-Making' (2004) 104(4) *Columbia Law Review* 1150; Isha Salian, '"Moneyball" Legal Analytics Helps Lawyers Assess Judges', *San Francisco Chronicle* (online, 14 July 2017) <www.sfchronicle.com/business/article/Moneyball-legal-analytics-helps-lawyers-11289892.php>.

80 Katz (n 75) 929–31.

81 See, eg, Katz (n 75); Harry Surden, 'Machine Learning and Law' (2014) 89(1) *Washington Law Review* 87; Katz, Bommarito and Blackman (n 79).

82 See, eg, 'LexisNexis Announces its Intention to Acquire Intelligize – Expanding its Securities and M&A Offering and Continuing to Invest in Analytical Tools', *LexisNexis* (Web Page, 21 September 2016) <https://www.lexisnexis.com/en-us/about-us/media/press-release.page?id=1474305583234261&y=2017?P01>; 'LexisNexis Announces Acqusition of Ravel Law', *LexisNexis* (Web Page, 8 June 2017) <https://www.lexisnexis.com/en-us/about-us/media/press-release.page?id=1496247082681222&y=2017>; Madeleine Farman, 'Bowmark Acquires Majority Stake in Lawyers on Demand', *Real Deals* (online, 30 May 2018) <https://realdeals.eu.com/news/2018/05/30/bowmark-lawyers-demand/>; Mark A Cohen, 'EY Acquires Riverview Law: A Different Perspective', *Forbes* (online, 10 August 2018) <https://www.forbes.com/sites/markcohen1/2018/08/10/ey-acquires-riverview-law-a-different-perspective/#174db5231950>; John Cook, 'Avvo to Be Acquired by Internet Brands, Parent of WebMD and Martindale-Hubbell, in Major Exit for Seattle-based Legal Marketplace', *GeekWire* (online, 11 January 2018) <https://www.geekwire.com/2018/avvo-acquired-internet-brands-parent-webmd-martindale-hubbell-major-exit-seattle-based-legal-marketplace/>.

83 For a discussion on some of the existing applications see Wimm Hardyns and Anneleen Rummens, 'Predictive Policing as a New Tool for Law Enforcement? Recent Developments and Challenges' (2018) 24(3) *European Journal on Criminal Policy and Research* 201, 207–11.

84 Tom Simonite, 'How to Upgrade Judges with Machine Learning', *MIT Technology Review* (Web Page, 6 March 2017) <www.technologyreview.com/s/603763/how-to-upgrade-judges-with-machine-learning>.

All of these advances are useful developments, to be sure, but they are sustaining innovations for the legal profession, not disruptive ones.[85] Unlike the changes detailed in the Parts above,[86] AI is likely to have a minimal effect on the profession as a whole for the next few years. The claims of commentators such as McGinnis and Pearce about wholesale disruption by machine learning are largely overblown.[87] Writing in 2014, at the start of the deep learning hype-cycle, they foretold massive changes across all parts of the lawyering process, from discovery, through search, document generation, and eventual prediction of case outcomes. Although all of these areas have been affected in some ways by machine learning, no evidence of widespread disruption has emerged in the last five years. Instead we see gradual changes to a small number of practice areas like mergers and acquisitions, or criminal law.

The slow advance of AI into areas of legal practice is almost certainly due to a number of foundational disconnects between the needs of deep learning systems and the reality of law. Deep learning algorithms are, essentially, statistical engines. So, to be successful, they need: (1) large datasets; (2) where the data are largely coherent; and (3) where the data resolve to a closed-end classification problem, that is, a type of problem that has a wide range of signals that are mapped onto a limited number of outcomes.[88] Deep learning approaches fail in situations where the data is sparse, or the test set does not closely resemble the training set, or where the dataspace is broad and filled with large amounts of novelty, outliers, or idiosyncrasies. This describes many areas of law.

This is not to say that deep learning will have no effect on the legal profession. Small firms are unlikely to be altered much by these changes.[89] On the other hand, medium and large law firms will be able to extract some efficiency gains from deep learning automation, and there will be some winners and losers in that race as with any technological change. Lawyers with data-centric technical skills will lead the charge here, and will be in great demand. This is actually different from saying that lawyers should learn computers. Machine learning in AI is not like other computer technologies: the magic is not primarily found in the programming language, the architecture, or the algorithm, it is found in the data and the complex statistics that generate the knowledge from them.[90] A small number of well-trained

85 Clayton M Christensen, *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail* (Harvard Business Review Press, 1997); Clayton M Christensen, Michael E Raynor and Rory McDonald, 'What Is Disruptive Innovation?' [2015] (December) *Harvard Business Review* 44 <https://hbr.org/2015/12/what-is-disruptive-innovation>.

86 See above Parts II–V.

87 John O McGinnis and Russell G Pearce, 'The Great Disruption: How Machine Intelligence Will Transform the Role of Lawyers in the Delivery of Legal Services' (2014) 82(6) *Fordham Law Review* 3041.

88 Marcus (n 68) 15.

89 Although, as discussed in Part II above, their days are probably numbered because of the widespread adoption of commodified rule-based systems, which happens to be an old type of AI.

90 Solon Barocas and Andrew D Selbst, 'Big Data's Disparate Impact' (2016) 104(3) *California Law Review* 671, 671: 'Advocates of algorithmic techniques like data mining argue that these techniques eliminate human biases from the decision-making process. But an algorithm is only as good as the data it works with'.

lawyer-technologists will do very well as a result of the complexity of this type of knowledge.

As to the general profession, some practice areas will be affected more than others – the most obvious ones are in insurance and accident litigation. Self-driving automobiles promise a reduction of transportation accidents, and this will likely alter the number and type of cases filed. So called 'ambulance chasing' will become less lucrative; although, perhaps, lawsuits filed against the providers of self-driving technology that does happen to be involved in an accident may make up the difference.[91] Outside this narrow area, deep learning will not much alter the profession.

Law graduates will likely be more seriously affected. Gone are the days when graduates could earn excellent pay as a first-year litigation lawyer at a prestigious firm, grinding out 14 hours of document review per day. Already a lot of this work is already done by LPO firms, and in the years to come, AI systems will do more and more. As a result, this work is permanently gone, at least for law graduates in developed countries.[92] The same will be true for low level work involving due diligence on merger and acquisitions, and also some basic drafting, administrative law matters, and procedurally-based work like trademark filings. This sort of work has long been the bread and butter of first year lawyers, and it is the area where they have learned the basics of commercial practice. The rise of AI, combined with the new-found reluctance of in-house counsel to pay for the training of junior lawyers, is going to affect the number of junior associates hired. Within the foreseeable future, graduate numbers entering commercial law practice will be flat or declining, and firms will be looking to retrain technology-capable established lawyers into the emerging areas of technology-assisted practice.

Government hiring of lawyers will be affected, but probably not as significantly. It is clear that a wide range of governmental and administrative services will be undertaken by deep learning systems – indeed, we already see machine learning systems involved in administrative law determinations of various kinds.[93] Given the commercial value of this, and the presence of large, coherent datasets within administrative law arenas, this trend will accelerate over the next five to ten years. We can expect deep learning systems to become widespread and routinely implemented in these areas by 2025. This will only have a marginal effect on lawyers, however, since the types of administrative law decisions made by these systems are typically not handled by lawyers at the moment, and are generally handled by paralegals and bureaucrats who should be legally trained, but often are not.

Similarly, we will see deep learning systems for automated, online dispute resolution. We can expect that the demand for litigators and judges at the lower levels will tail off, as AI and online dispute resolution systems come to handle a

91 Jeffrey Gurney, 'Sue My Car Not Me: Products Liability and Accidents Involving Autonomous Vehicles' [2013] (2) *University of Illinois Journal of Law, Technology and Policy* 247, which examines who should be liable for accidents involving autonomous vehicles, and suggests a four part ontology of responsibility.

92 Although there will always be work for tech-literate lawyers overseeing this sort of work. And the push to outsource litigation support has been a boon for well-trained lawyers in the developing world.

93 Zalnieriute, Bennett Moses and Williams (n 12).

range of disputes.[94] This is an extension of the existing statistical approaches to online dispute resolution, championed by large-scale providers like Modria. The technology is progressing quickly, and within a few years we should expect to see rapid probabilistic resolution of disputes as a significant feature of consumer-level problems.

These machine learning driven changes will affect law schools of course. In keeping with the discussion above,[95] there will generally be a reduced demand for law degrees, as would-be law students begin to see the decline in the market for their services after graduation. Since machine learning solutions will be disproportionately concentrated in commercial practice, non-elite law schools will start to feel the heat, as their graduates struggle to gain jobs in big firm practice.[96] Of course, law schools can gain a competitive advantage through technology-driven curricula.

AI will not, therefore, have as profound an impact on law and the profession as media pundits would suggest, at least for the next few years. Over the long term, however, much of lawyering may become dominated by AI systems. All of the legal areas that human beings typically excel in – judgment, emotional reasoning, understanding ambiguity – are research fields in AI, and the development of meaningful solutions for these aspects of legal practice are likely in the next 20 years.[97] However, 20 years is a long time, and the prospect of an artificial general legal intelligence is so far away that it is not worth worrying about, given the other challenges the legal profession faces.[98]

VII THE DEATH OF THE LEGAL PROFESSION?

The five Parts above detail profound changes that have swept up law and legal institutions, and which promise to accelerate changes to the profession over the

94 Richard Susskind, *Online Courts and the Future of Justice* (Oxford University Press, 2019); Colin Rule, 'Making Peace on Ebay: Resolving Disputes in the World's Largest Marketplace' (Fall 2008) *ACResolution* 8 <http://colinrule.com/writing/acr2008.pdf>; Benjamin H Barton and Stephanos Bibas, *Rebooting Justice: More Technology, Fewer Lawyers, and the Future of Law* (Encounter Books, 2017) 111–15.

95 See above Parts II and IV.

96 This will be true in Australia as students assess the value of their degree, even if the payment is deferred. A complicating factor is that elite schools have moved towards a tremendously expensive JD, as opposed to the cheaper Commonwealth supported LLB. This may mean that students choose the middle path: relatively highly perceived schools that offer an LLB.

97 This said, the predictions here could all be wrong. For example, prognostications about global mobility of white collar work has a mixed history. See Ben Casselman, 'The White-Collar Job Apocalypse That Didn't Happen', *The New York Times* (online, 27 Sept 2019) <https://www.nytimes.com/2019/09/27/business/economy/jobs-offshoring.html>, noting that the 2007 Blinder predictions of the major offshoring of white collar work from the United States ('US') has not eventuated in the ways expected, and has meant more near-shoring of work than expected.

98 Cf Benjamin Alarie, 'The Path of the Law: Toward Legal Singularity' (2016) 66(4) *University of Toronto Law Journal* 443, who argues that the 'legal singularity' will arrive soon when the accumulation of massively more data and dramatically improved methods of inference make legal uncertainty obsolete, affecting all areas of law. For the standard account of the dangers of artificial general intelligences: see Nick Bostrom, *Superintelligence: Paths, Dangers, Strategies* (Oxford University Press, 2014).

coming decades. The effects of technology, globalisation, and the thirst for business efficiency are relentless and implacable, and they point to a future of law that is very different from its past.

The Parts above have focused on the effect of these changes on specific parts of the profession, including law firms, schools, graduates, the Bar, and so on. What of the effect of these changes on the profession as a whole?

If there is one overarching theme to the observations previously made, it is that there has been an unnoticed shift in legal practice, from a unitary legal profession to a heterogenous legal services market.[99] The recent past has seen the emergence of legaltech providers, managed legal services firms, and LPOs; and the near future promises new actors, like legal platforms and artificial legal intelligences. None of these market entrants are found in the traditional conception of a legal 'profession', and their increasing significance to legal service delivery foretells significant changes to the concept of law as a social function that is overwhelmingly delivered, controlled, and guarded by a learned profession. Another way of understanding this is to say that we face a future that needs law a great deal, but lawyers a lot less.

The implications for the profession are significant. Consider the example of which entities may 'practise law'. Bar associations and law societies appear to be strong and effective in their trade protection of the profession. A number of these entities have successfully promulgated and enforced regulations involving the unlicensed practice of law, or filed the occasional lawsuit against non-lawyers seeking to enter the legal services market. But a quick review of the last ten years shows their waning influence in most common law jurisdictions. They have been generally unsuccessful in fighting off legaltech providers who have offered automated document generation systems to the general public.[100] And although they have had the occasional success against new market entrants,[101] in general they have not managed to defeat, or even slow, the systematic offshoring of legal services by LPOs. And, given the scale of alternative legal service providers, they do not seem to have managed to convince consumers of legal services that only lawyers can meet their legal needs.

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99 See Richard Susskind, *Tomorrow's Lawyers: An Introduction to Your Future* (Oxford University Press, 2nd ed, 2017). See also the posts of Bill Henderson, *Legal Evolution* (Web Page) <https://www.legalevolution.org/>.

100 This has been evident in the US where the profession has been most litigious in relation to the technology-mediated legal services provision. See, eg, *Unauthorized Practice of Law Committee v Parsons Technology Inc*, 179 F 3d 956 (5th Cir, 1999); *California Business and Professions Code*, Cal BPC Code § 6400 (West 2020); Kathleen E Justice, 'There Goes the Monopoly: The California Proposal to Allow Nonlawyers to Practice Law' (1991) 44(1) *Vanderbilt Law Review* 179; *Janson v LegalZoom.com Inc*, 802 F Supp 2d 1053 (WD Mo, 2011); *In Re Boettcher*, 262 BR 94 (Bankr ND Cal, 2001); *Thomas v State*, 226 SW 3d 697 (Tex Ct App, 2007); Isaac Figueras, 'The LegalZoom Identity Crisis: Legal Form Provider or Lawyer in Sheep's Clothing?' (2013) 63(4) *Case Western Reserve Law Review* 1419, 1440: 'LegalZoom may need to alter its business model to make it more akin to a legal self-help kit than it currently is. Otherwise, LegalZoom may suffer from more legal challenges in the future' (internal citations omitted).

101 Bennett et al (n 7) 20; Ray Worthy Campbell, 'Rethinking Regulation and Innovation in the US Legal Services Market' (2012) 9(1) *New York University Journal of Law and Business* 1, 45.

Perhaps most telling is the observation that legal regulators in a range of common law jurisdictions have struggled even to define the appropriate boundaries of legal practice. Responding to the emergence of new market players, the American Bar Association convened a blue-ribbon panel to define the boundaries of 'the practice of law'. After years of study and consultation seeking to articulate a workable definition, it eventually just gave up.[102] Instead, within America, as in Australia, regulators have created circular definitions that specify the practice of law as 'what lawyers do'.[103] So, for example, section 10 of the Australian Legal Profession Uniform Law,[104] prohibits unqualified entities from engaging in legal practice, and defines 'engaging in legal practice' as efforts to 'practise law or provide legal services'.[105] What then amounts to 'legal services?' This is circularly defined as 'work done, or business transacted, in the ordinary course of legal practice'.[106]

Although definitional imprecision like this may seem unimportant, it demonstrates a key problem with legal regulators, who see the future of law through the perspective of the professional past, where lawyers alone engaged in the practice of law and everyone else was forbidden entry. In the face of the structural changes driven by automation and globalisation these regulatory responses largely delimit a shrinking professional market.[107] It is appropriate for admitting authorities, law societies, and the other regulators to continue to stake out the appropriate limits of the legal profession. But in doing so they ignore the vast expansion of law-related and law-adjacent services that are being performed without them. If they continue down the path they have been on, they will resemble the governing committee of an old school club, anxious to ensure that jackets and ties are worn in the parlour, oblivious to the fact that their membership is shrinking and no new members want to join.[108]

The concluding observation then is perhaps this: that although the profession will not die, it faces a future where its centrality is no longer assured. Those within

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102 'Task Force on the Model Definition of the Practice of Law: Board of Governors Resolution', *American Bar Association* (Web Page) <https://www.americanbar.org/groups/professional_responsibility/task_force_model_definition_practice_law/>. See also Geoffrey C Hazard Jr and W William Hodes, *The Law of Lawyering* (Aspen Publishers, 3rd ed, 2001) § 46.4: '[I]n our law-dominated society, no logically satisfactory and practically workable definition is possible'; Kathleen Blanchard and Bonnie Howe, 'Unauthorized Practice of Law' (1989) 3(1) *Georgetown Journal of Legal Ethics* 93, 97: 'Formulation of a standard or logical definition of the unauthorized practice of law has not been successful'.

103 Campbell (n 101) 37.

104 See *Legal Profession Uniform Law Application Act 2014* (Vic) sch 1 s 10.

105 Ibid sch 1 s 6.

106 Ibid.

107 Thomas D Morgan, 'On the Declining Importance of Legal Institutions' [2012] (2) *Michigan State Law Review* 255, 255 <https://digitalcommons.law.msu.edu/lr/vol2012/iss2/2/>: '[L]awyers' monopoly over the delivery of legal services has eroded'.

108 This is not to say that other parts of the profession have not confronted this topic, and various non-regulatory parts of the profession have sought to respond to the challenges of their futures, see Law Society of New South Wales, *The Future of Law and Innovation in the Profession* (Report, 2017); Law Institute Victoria, *Disruption, Innovation and Change: The Future of the Legal Profession* (Report, 2015).

it need to rethink the role of the profession if it is to continue to be relevant to the provision of legal services.[109]

This rethinking will take many forms. Regulators can continue down the path of seeking to narrowly define who is allowed to practice law – with predictably unsatisfactory results – or broaden their regulatory ambit to recognise the other legal service providers and to instil in them the kinds of values and ethics that have protected consumers and society for more than a thousand years in our system. Examples of this latter approach can be found in the regulatory responses of Ontario, Canada[110] and England and Wales from 2007;[111] and more recently in British Columbia, Canada,[112] and a number of American states including Oregon, Washington, Utah, and Arizona.[113] Although none of these approaches go as far as is likely to be necessary, they are foundations on which a flexible and effective regulatory response can be built that serves the legal needs of the community.[114]

Other institutions within the profession will also have to give up their natural conservatism and adapt quickly. Law schools are a good example: for a range of reasons, not all of which are in their control, they have focused on conveying the content within Priestley 11 subjects and the transmission of a small subset of legal skills like advocacy and drafting. It is clear from the above discussion that graduates are likely to need a very different set of skills than traditionally transmitted: each new cohort of graduates are emerging into a much-changed profession and will have to support themselves for 40 or 50 years of even greater change. Many schools have recognised that they need a different set of skills than

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109 For similar discussions of the transformational effects of technology on the legal profession and professions in general see Susskind and Susskind (n 19); Flood and Robb (n 76); Lisa Webley et al, 'The Profession(s)' Engagements with LawTech: Narratives and Archetypes of Future Law' (2019) 1(1) *Law, Technology and Humans* 6; John Flood, 'Legal Professionals of the Future: Their Ethos, Role and Skills' in Michele DeStefano and Guenther Dobrauz-Saldapenna (eds), *New Suits: Appetite for Disruption in the Legal World* (Stämpfli Verlag, 2019) 115.

110 Law Society of Ontario, *By-Law 4* (at 27 February 2020) <https://lawsocietyontario.azureedge.net/media/lso/media/legacy/pdf/b/by/by-law-4.pdf>.

111 *Legal Services Act 2007* (UK) s 12.

112 'Designated Paralegal Initiative Improves Access to Lower Cost Legal Services', *The Law Society of British Columbia* (Web Page, 13 January 2017) <https://www.lawsociety.bc.ca/about-us/news-and-publications/news/2017/designated-paralegal-initiative-improves-access-to/>; 'Paralegal Licensing Process', *Law Society of Ontario* (Web Page) <https://lso.ca/becoming-licensed/paralegal-licensing-process>.

113 Oregon State Bar Futures Task Force, 'The Future of Legal Services in Oregon' (Executive Summary, June 2017) <http://www.osbar.org/_docs/resources/taskforces/futures/futurestf_summary.pdf>; 'Limited Practice Officers', *Washington State Bar Association* (Web Page, 21 May 2020) <https://www.wsba.org/for-legal-professionals/join-the-legal-profession-in-wa/limited-practice-officers>; 'Legal Document Preparer Program', *Arizona Judicial Branch* (Web Page) <https://www.azcourts.gov/cld/Legal-Document-Preparer-Program>; Utah Work Group on Regulatory Reform, *Narrowing the Access-to-Justice Gap by Reimagining Regulation* (Report, August 2019) <https://www.utahbar.org/wp-content/uploads/2019/08/FINAL-Task-Force-Report.pdf>.

114 See Rebecca L Sandefur, 'What We Know and Need to Know about the Legal Needs of the Public' (2016) 67(2) *South Carolina Law Review* 443, 446, noting that 'well over 100 million Americans [are] living with civil justice problems, many involving … "basic human needs"'. This includes matters such as housing (evictions and mortgage foreclosure), child custody proceedings, and debt collection. See also American Bar Association, *Report on the Future of Legal Services in the United States* (Report, 2016) 12 <https://www.americanbar.org/content/dam/aba/images/abanews/2016FLSReport_FNL_WEB.pdf>.

they are currently provisioned for, but they will almost certainly need to accelerate their thinking to keep up with the changes discussed above.[115]

More than this limitation, if it is true that many of the entry-level legal jobs are taken by automation or overseas paralegals,[116] then there will be a huge gap in the three to five years post-graduation where legal graduates normally gain the experience and skills necessary to become effective lawyers.[117] Without this type of training and immersion within the culture of law, how will we ensure the transmission of the kinds of values and ethical precepts that ensure that the rule of law is protected in society?

Space does not permit the articulation of every response that will be necessary for the profession to respond appropriately to the forces that assail it. The basic conclusion however is clear: the changes discussed in this article describe a profound splintering of legal service provision. But this of itself will not kill the legal profession. What will kill the profession is inaction.[118] As more and more legal service providers solve legal problems from outside the legal profession, we will see a growing legal services market that is dominated by those who do not bring with them the shared understanding of what it means to operate within a learned and honourable profession, and who do not automatically respect or uphold the rule of law.[119] These operators can exist outside the profession as they do now; or the profession can adapt and expand to include them, and use its power to ensure the maintenance of values that we all as lawyers revere and which are necessary for the proper functioning of our society. This choice is, essentially, up to the profession. To this point it has chosen the former; but it would be better for it and all of us if it were to choose the latter.

Daniel and Richard Susskind, together with the alternative legal providers like those described above, may claim that the future simply does not need the legal profession.[120] But it will be a better future for all if the profession retains and even expands its influence over the development of law. This is still possible if the legal profession and legal institutions within it all understand the future that lies ahead of them, and choose to act.

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115 See Julian Webb, 'Information Technology and the Future of Legal Education: A Provocation' [2019] (Special Issue) *Griffith Journal of Law and Human Dignity* 72; Dan Hunter, 'Two Futures for Law Schools' (Paper) (forthcoming) (draft on file with author); Oliver Goodenough, 'Developing an E-Curriculum: Reflections on the Future of Legal Education and on the Importance of Digital Expertise' (2013) 88(3) *Chicago-Kent Law Review* 845.

116 See above Parts II, III and VI.

117 See also Dan Hunter, 'Legal Ed's Futures No 19: Artificial Intelligence and Platforms', *PrawfsBlawg* (Blog Post, 14 March 2018) <https://prawfsblawg.blogs.com/prawfsblawg/2018/03/legal-eds-futures-no-19.html>, describing the 'valley of death' that graduates will likely experience between the end of law school and the point at which they can meaningfully practice law.

118 See Brooke Moore, 'A Client-Driven Firm: The Future of Law is Now' (2017) 43(4) *Law Practice* 56, calling for a proactive approach from the legal profession.

119 For a discussion of some of the ethical issues that are already present within alternative legal service providers, see Dzienkowski (n 28) 3023–36 discussing the ethical implications from the development of alternative legal services providers and how this differs from traditional legal practitioners.

120 Susskind and Susskind (n 19). Cf Lyria Bennett Moses, 'The Need for Lawyers' in Kevin Lindgren, Francois Kunc and Michael Coper (eds), *The Future of Australian Legal Education* (Thomson Reuters, 2018) ch 22.