



LAW BUILDING F8, UNSW SYDNEY NSW 2052 AUSTRALIA

T +61 (2) 9385 2254 | ABN 57 195 873 179 | CRICOS Provider Code 00098G

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An AI Action Plan for All Australians

About us

The Allens Hub for Technology, Law and Innovation ('the Allens Hub') is an independent community of scholars based at UNSW Sydney. As a partnership between Allens and UNSW Law, the Allens Hub aims to add depth to research on the diverse interactions among technology, law, and society. The partnership enriches academic and policy debates and drives considered reform of law and practice through engagement with the legal profession, the judiciary, government, industry, civil society, and the broader community. More information about the Allens Hub can be found at <http://www.allenshub.unsw.edu.au/>. Our submissions reflect our views as researchers and are not an institutional position.

The Law Society of New South Wales Future of Law and Innovation in the Profession (FLIP) research stream is a collaboration between UNSW Law and the Law Society to generate a stream of research into the multiple changes impacting the legal profession and its interaction with society more broadly. This research includes technology such as automation and artificial intelligence as it impacts legal practice, courts and provides solutions to facilitate improved access to justice, changing clients' needs and expectations, new ways of working, community needs and legal education. The research and submissions generated by the FLIPstream are those of the individual researchers named.

The Disability Innovation Institute at UNSW (DIIU) is a research centre for disability-relevant interdisciplinary research, with a particular focus on inclusive and co-produced research. Submissions reflect the scholarship of the individual researchers involved.

The Australian Society for Computers & Law is a registered Australian charity established for the purpose of advancing education and advocacy on critical issues at the intersection of law, technology and society. Its predecessor association was established in 1981, and continues to provide an important forum for learned discussion and debate between academics, practitioners, industry leaders and government, seeking to promote equality, governance and the rule of law.

About this Submission

While we are grateful for this opportunity to make a submission, a short time frame at a busy time of the academic year prevents a more substantial contribution. Instead, we discuss briefly our views on some of the issues we believe require further consideration in the formulation of an Action Plan for AI.

We focus on following issues:

- Defining artificial intelligence
- Skills and capabilities for an AI enabled future
- Artificial intelligence in the legal sector
- The need to include law reform in the Action Plan
- Legal options for lowering barriers to entry

Defining AI

There are currently many competing definitions of artificial intelligence, all of which overlap but none of which have broad national support. However, some elements of the definition section in the Action Plan are misleading. For example, “the sensors that collect data” are not necessarily a subset of artificial intelligence, even on its broadest definitions. A definition of AI is important in the context of a national strategy because, as the historical example of nanotechnology demonstrates, organisations will strategically identify with or exclude themselves from government initiatives depending on whether it is seen as positive (eg money grants) or negative (eg regulation). It may be preferable to adopt an internationally recognised definition whose scope aligns with the government’s strategy. If objects such as “sensors that collect data” are to be included, an alternative name for the scope may be appropriate (eg data technologies).

Skills and capabilities for an AI enabled future

A primary way in which modern states and economies have met the challenges of new technologies, and related unemployment and underemployment, has been through education and training or retaining. The Discussion Paper highlights this by reference to Australia’s past experiences with workforce transition. Education and retraining are certainly part of the needed response, especially in the short term where the focus is on narrow (single focus, limited range) AI technologies. This entails the recognition that AI and other technologies will permeate many areas of the economy and many occupations. This includes our most critical and dominant ones, like medicine and healthcare, education, banking, computer science and engineering, manufacturing, media and entertainment, policing and law. The basic building blocks of technological competence, such as numeracy and statistics, computer and coding literacy, ethics and regulation need to be taught both in primary and secondary schools and then across disciplines in the tertiary sector, including of course in computer science itself.

For secondary schools, Lyria Bennett Moses wrote a paper in partnership with the NSW Department of Education exploring why interdisciplinary education was essential and how it could be implemented.¹ In summary, it is essential because (1) consumers need to understand how prices and marketing may be impacted by online behaviours, just as they need to understand how to compare prices of milk in different cartons, (2) citizens need to understand how personalised election campaigning, social media algorithms and personalised search impact on the information they see, and (3) people need to be able to work alongside AI systems, with an understanding of their affordances and limitations. Interdisciplinary modules can be created to explore mathematical, technical and ethical issues associated with different applications of AI, with awareness of social and historical context.

For universities, interdisciplinary learning is the only way to ensure that AI systems are applied appropriately in diverse domains. For example, all law students need to understand the limitations

¹ Lyria Bennett Moses, Helping future citizens navigate an automated, datafied world, Education: Future Frontiers, <https://education.nsw.gov.au/teaching-and-learning/education-for-a-changing-world/resource-library/helping-future-citizens-navigate-an-automated--datafied-world>.

of automated systems in government-decision making and they need to ask the right questions about the use of AI in the criminal justice system.² Similarly, medical students need to understand the affordances and limitations of AI tools in the health sector. Conversely, computer scientists and software engineers need a broad understanding of risk and ethics as applied to the AI lifecycle (from conception through implementation to retirement). Education in artificial intelligence also needs to be inclusive so that, in particular, women, people with disabilities, and people from diverse backgrounds are encouraged to develop increasingly important skills and capabilities and to understand the distinctive benefits or risks that AI presents to their particular group. Diversity also reduces the risk of “group think” and ignoring issues that do not affect (typically white, male) IT professionals.

Consideration also needs to be given to what is needed for a longer time horizon. An AI enabled future may not simply mean that more capabilities and sensitivities are needed. For some, perhaps many, it may remove the possibility of work, of whatever sort, altogether. British economist and futurist Dr Daniel Susskind has argued that education cannot indefinitely solve the problem of unemployment due to technological progress, or a ‘world without work’, because it simply cannot provide the technical skills that are required to compete with machines;³ the premise being that computers will become more proficient at an increasing range of skills than most humans.

One response is that planning is needed for a society where there is not enough meaningful work to go around. The typically suggested proposal is that the state respond through its classical means of redistribution, meaning changes in welfare (for instance, a universal basic income) and in taxation policy.⁴ Susskind suggests another response. Indeed, he does not really give up on education, and nor should the Australian Government, but rather suggests that education be redirected. This redirection is towards teaching the skills that AI cannot replicate,⁵ our human (socio-emotional) attributes and skills, as well as improving people’s capacity to live fulfilling lives without work through the building of character and life skills.⁶

We focus on (and especially endorse) Susskind’s first suggestion and note the Discussion Paper’s reference to social and emotional skills. It is the worker’s human characteristics that differentiate them from a technological solution.⁷ Often these characteristics are termed ‘soft skills’, which might have the misleading effect of suggesting they are easy, held exclusively by women, or of secondary importance. Soft skills – or, perhaps better put, human interpersonal skills – comprise a ‘combination of competencies that contribute to how people know and manage themselves as well as their relationships with others’.⁸ They include emotional intelligence, cultural awareness, communication, collaboration, and ethical competence and personal courage.⁹ There is growing awareness in the university sector and the legal profession, as one example, of the critical importance of soft skills and the need for lawyers to be better trained in them. Lawyers, as with all professionals and most workers, have always needed soft skills competence for their role. But, as an

² Lyria Bennett Moses, ‘The Need for Lawyers’ in Kevin Edmund Lindgren, François Kunc and Michael Coper (eds), *The Future of Australian Legal Education: A Collection* (Thomson Reuters, 2018) 355.

³ Daniel Susskind, *A World Without Work* (Allen Lane, 2020) 153, 165.

⁴ Toby Walsh, *It’s Alive – Artificial Intelligence from the Logic Piano to Killer Robots* (La Trobe University Press, 2017) 269. The State could, however, accept growing inequality and division between the wealthy and the unemployable.

⁵ Daniel Susskind, *A World Without Work* (Allen Lane, 2020) 155.

⁶ Daniel Susskind, *A World Without Work* (Allen Lane, 2020) 226-227.

⁷ See Michael Legg, “Embrace robotic disruption but don’t lose your human skills”, *The Australian*, 16 June 2017.

⁸ Daniel Goleman, ‘What Makes a Leader?’ (November–December 1998) *Harvard Business Review*

⁹ See eg Alyson Carrel, ‘Legal Intelligence Through Artificial Intelligence Requires Emotional Intelligence: A New Competency Model for the 21st Century Legal Professional’ (2019) 35 *Georgia State University Law Review* 1153, 1160 and Randall Kiser, *Soft Skills for the Effective Lawyer* (Cambridge: 2017), 185-186.

illustration of the above, there is a real sense that as technology improves, such as artificial intelligence to conduct research and produce and present legal solutions,¹⁰ it may be that only the 'soft' aspects of law are left to lawyers. Many assert that human skills will determine a lawyer's success.

Meanwhile, economists Ajay Agrawal, Joshua Gans and Avi Goldfarb explain the machine versus human comparison – and therefore towards where the redirection might be – by reference to prediction and judgement.¹¹ Typically, humans use both prediction and judgement to make decisions but previously these have been thought of as combined and therefore as a single step. AI, in particular machine learning, allows for the unbundling of decision making but performs only the 'prediction' step in being able to process huge amounts of data to find patterns. But AI does not perform the 'judgement' step. Humans must use judgement to determine what to do with the predictions.¹² This distinction between prediction (AI) and judgment (human) has been applied to the practice of law.¹³ As a final example of what has already been realised in the legal context, machine learning is deployed in relation to the review of millions of documents for litigation. However, the lawyer must still use their judgment to train the AI to do so, and then to determine what to do with the output.¹⁴

It is essential, therefore, that focusing on technical skills and capabilities, such as coding or statistical analysis, does not push out the human, interpersonal or 'soft'. The pedagogical goal should be to provide people with the frameworks they can draw on to develop and deploy the human skills that AI does not and cannot provide. Some will have a more natural affinity for these skills compared to others. However, they can be learnt and improved, and are currently taught indirectly and by default anyway. This applies to primary through to tertiary education and in workplaces themselves. As such, a more conscious, structured approach to human, interpersonal skills education is needed, for both general education and for specialty areas. In the context of law, additional approaches to acquiring these interpersonal skills might be supported through, for instance, law degree programs that include greater focus on alternative dispute resolution, and new management methods, such as change management, project management and design theory.¹⁵ Finally, it is very important we do not simply add to the teaching and regulatory loads of teachers and their organisations. There needs to be a thoughtful approach, with the focus on 'skills and habits', over more and more content.¹⁶

Artificial intelligence in the legal sector

Government has the capacity to support the growth of artificial intelligence tools in the legal sector. 'LegalTech' includes a broad range of technology and software tools and products created for use in legal services. A recent survey suggested that 22 per cent of Australian LegalTech products on the market use AI.¹⁷ The top three 'underlying technologies' supporting these systems were:

1. Supervised machine learning

¹⁰ Kate Galloway, Kate Offer and Natalie Skead, 'Disrupting legal education' (2017) 44(10) *BRIEF* 10, 11.

¹¹ Ajay Agrawal, Joshua Gans and Avi Goldfarb, *Prediction Machines — The Simple Economics of Artificial Intelligence* (Harvard Business Review Press, 2018).

¹² *Ibid* 83, 161–62. See also Paul Daugherty and H James Wilson, *Human + Machine: Reimagining Work in the Age of AI* (Harvard Business Review Press, 2018) 50–51.

¹³ Michael Legg and Felicity Bell, 'Artificial Intelligence and the Legal Profession: Becoming The AI-Enhanced Lawyer' (2019) 38(2) *University of Tasmania Law Review* 34.

¹⁴ *Ibid*, 44-48.

¹⁵ See, eg, the Law Society of New South Wales' FLIP Stream resources: <https://www.lawsociety.com.au/about-us/Law-Society-Initiatives/flip/UNSW-collaboration-FLIP-stream>

¹⁶ Steven C Bennett, 'When Will Law School Change?' (2010) 89(1) *Nebraska Law Review* 87, 129.

¹⁷ Eric Chin, 'The Global Legal Tech Market' (Presentation, Legal Innovation and Tech Fest, online, 19 November 2020).

2. Information extraction natural language processing;
3. Classification clustering natural language processing.¹⁸

A 2019 survey by consultants Alpha Creates found that of 111 Australian LegalTech enterprises, just over half were founded by one person and nearly 30 per cent by two people.¹⁹ Generally, founders and employees, and presumably contractors, seem to be a mixture of entrepreneurs (who are sometimes former lawyers or practising lawyers), software developers, scientists, and industry experts,²⁰ and a proportion were founded and are run by lawyers.²¹

LegalTech might be used by legal practitioners themselves or be offered direct to consumers of legal services. In this section, we first focus on the problem of access to justice where AI is seen as a potential solution before considering some of the general regulatory challenges and risk areas.

Access to justice ‘includes general awareness of available remedies; availability and affordability of legal advice and representation; and absence of excessive or unreasonable fees, procedural hurdles, linguistic or physical barriers and other impediments’.²² All members of the community should be able to protect their rights, yet the cost of legal advice and representation places it beyond the reach of most.²³ Among the most vulnerable and disadvantaged in our society, inability to access legal services worsens problems of poverty, inequality and unremedied injustice. It may also have flow-on consequences in other sectors – such as health and social services – involving significant additional financial costs.²⁴ Currently, the COVID-19 pandemic has created greater demand for legal assistance in the community as job losses, business closures, and inability to access services meant people needed to know their rights and be able to take appropriate action in relation to employment issues, housing issues (such as being unable to pay rent), financial issues (such as dealing with debt repayments and possible bankruptcy), and civil rights more generally as fines or arrests took place due to contravention of restrictions made pursuant to emergency powers.²⁵

The ability to deliver simple legal services at scale means that AI is now regarded as a critical solution to problems of access.²⁶ This includes technologies such as document assembly, chatbots (which can walk a user through a series of steps to answer simple legal queries or be directed to curated information²⁷) and automated online dispute resolution services.

¹⁸ *ibid.*

¹⁹ Eric Chin, ‘0 to 111: Is Australia’s LegalTech Having a Cambrian Moment?’ (Presentation, Legal Innovation and Tech Fest, Sydney, 12–13 June 2019).

²⁰ Jan Jacobowitz and Justin Ortiz, ‘Happy Birthday Siri: Dialing in Legal Ethics for Artificial Intelligence, Smartphones and Real Time Lawyers’ (2018) 4(5) *Texas A&M Journal of Property Law* 407, 418–19.

²¹ Dan Jackson, ‘Human-Centered Legal Tech: Integrating Design in Legal Education’ (2016) 50(1) *The Law Teacher* 82, 84.

²² World Justice Project, ‘Rule of Law Index’, 15, <https://worldjusticeproject.org/sites/default/files/wjproli2012-web.pdf>

²³ Asher Flynn and Jacqueline Hodgson, ‘Access to Justice and Legal Aid Cuts: A Mismatch of Concepts in the Contemporary Australian and British Legal Landscapes’ in Asher Flynn and Jacqueline Hodgson (eds) *Access to Justice and Legal Aid: Comparative Perspectives on Unmet Legal Need* (Hart, 2017) 1, 6–7. See also Deborah L Rhode, ‘Access to Justice: A Roadmap for Reform’ (2014) 41 *Fordham Urban Law Journal* 1227, 1228.

²⁴ Law Society of New South Wales, *The Flip Report* (2017) <https://www.lawsociety.com.au/sites/default/files/2018-03/1272952.pdf>

²⁵ See <https://justiceconnect.org.au/help/covid19/>

²⁶ Eg Justice Connect, ‘We’re building AI that can diagnose your legal problem’, 23 October 2019, <https://justiceconnect.org.au/were-building-ai/>; Lauren Moxley, ‘Zooming Past the Monopoly: A Consumer Rights Approach to Reforming the Lawyer’s Monopoly and Improving Access to Justice’ (2015) 9(2) *Harvard Law and Policy Review* 553.

²⁷ Robert Ambrogi, ‘This Week in Legal Tech: Everyone’s Talking About Chatbots’, *Above the Law* (Web Page, 17 April 2017) <https://abovethelaw.com/2017/04/this-week-in-legal-tech-everyones-talking-about-chatbots/?rf=1>

Nevertheless, there is doubt that AI alone can solve access to justice issues.²⁸ For the most socially disadvantaged in Australian society, legal problems tend to be one of multiple, interconnected issues that together compromise ability to access self-help, including automated options. Further, Australia has a ‘digital divide’ with around 14 per cent of households not having home internet access.²⁹ Thus, it may be that ‘[t]hose most likely to benefit from low-cost automated options... are not those most in need, but rather people whose affairs are uncomplicated, relationships are not characterised by coercion, control or fear, and who are able to afford the costs of the service’.³⁰ LegalTech is therefore often described as being targeted at the ‘missing middle’ rather than those with the greatest need.³¹

Regardless, a critical concern is that consumers, especially less powerful ones, might not be able to tell the difference between those providers who are lawyers and those who are not, nor what implications this has for them. Legal practitioners are highly regulated, in Australia by co-regulatory arrangements which see a division of responsibilities between Law Societies and Bar Associations, and independent legal regulators (quasi-governmental). The ‘targets’ of regulation are individual lawyers.³² Accordingly, when legal practitioners use AI enabled LegalTech in their own work, the individual legal practitioner bears professional responsibility and liability for any errors or omissions that eventuate. This is not a perfect regulatory scheme but ensures greater consumer protection than to those using direct access LegalTech. Research from England and Wales, though not immediately comparable to the Australian context, has found that most consumers of legal services assume (incorrectly) that all legal service providers are regulated in some way.³³ However, there may be few or no redress mechanisms if loss is suffered as a result of choosing the ‘Lawtech’ or ‘LegalTech’³⁴ option instead of the ‘real life’ lawyer. This is addressed further below in the context of law reform.

Law reform

The AI Action plan lists the need to “ensure our regulatory system keeps pace with advancing technologies” as a subset of the Society stream. But it is significantly broader than that. What is required is law reform across a number of domains where new capabilities are challenging the operation of law. This is not solely about “regulation” (depending on the definition of that term) but extends to administrative law, discrimination law, privacy law, consumer law, civil liability, legal services regulation and many more. In our view, law reform warrants its own stream and would

²⁸ Eg, Francesca Bartlett, ‘An Uncomfortable Place for Technology in the Australian Community Legal Sector’ (Presentation, International Legal Ethics Conference VIII, University of Melbourne Law School, Melbourne, 7 December 2018).

²⁹ Australian Digital Inclusion Index, ‘Digital Inclusion in Australia’ <https://digitalinclusionindex.org.au/about/about-digital-inclusion/> (Figures from 2016-17).

³⁰ Felicity Bell, ‘Family Law, Access to Justice, and Automation’ (2019) 19 *Macquarie Law Journal* 103, 125.

³¹ Productivity Commission, *Access to Justice Arrangements* (Inquiry Report No 72, 2014) vol 2, 875.

³² As opposed to entities, which itself has certain limitations: see, eg, Christine Parker, ‘Law Firms Incorporated: How Incorporation Could and Should Make Firms More Ethically Responsible’ (2004) 23(2) *University of Queensland Law Journal* 347.

³³ Competition and Markets Authority, *Legal Services Market Study* (Report, 16 December 2016) 11 [29]; Stephen Mayson, *Reforming Legal Services Regulation Beyond the Echo Chambers* (Final Report of the Independent Review of Legal Services Regulation, June 2020) xi.

³⁴ LegalTech encapsulates ‘technology and software tools, and products and services...created for clients, law firms and key stakeholders in the legal industry’: Kirk Mahoney, ‘Legal Tech Market Report’ (*Catalyst Investors*, 29 November 2017) <https://catalyst.com/research_item/legal-tech-market-overview/> accessed 15 May 2020. It includes those products intended for use by lawyers themselves (whether practising in firms, or as corporate counsel); and those marketed directly to businesses or consumers: Rebecca L Sandefur, *Legal Tech for Non-Lawyers: Report of the Survey of US Legal Technologies* (Report, American Bar Foundation 2019) <http://www.americanbarfoundation.org/uploads/cms/documents/report_us_digital_legal_tech_for_nonlawyers.pdf>. Elizabeth Chambliss reports: ‘In 2012, investors put \$66 million dollars into legal service technology companies. By 2013, that figure was \$458 million’: Elizabeth Chambliss, ‘Evidence-Based Lawyer Regulation’ (2019) 97(2) *Washington University Law Review* 297, 317. Note also Alison Hook’s reasoning for preferring the term ‘LegalTech’ over ‘LawTech’: *The Use and Regulation of Technology in the Legal Sector beyond England and Wales* (Research Paper for the Legal Services Board, Hook Tangaza, 2019) 18-19.

involve a partnership with organisations such as the Australian Law Reform Commission to establish a program of work.

The role of *law* (a word we should not shy away from) in the context of artificial intelligence is particularly important given a naïve tendency to believe that crucial social outcomes can be reached merely through the promulgation of ethical principles or statements that development should be “responsible”. Law provides the terms on which technological development can happen in ways that align with a society’s values. An automated system that only shows certain job advertisements to men (for example), should be illegal as well as irresponsible. This does not negate the role of non-legally enforceable principles and standards (conformance with which can also be made mandatory), but rather limits them to their proper sphere.

The use of the term “law” rather than “regulation” also highlights that what is required is not generally regulation targeting artificial intelligence as such. Rather, what is required is a broad program of law reform that addresses the plethora of issues raised across a range of legal fields. These laws should continue to apply, to the extent possible, in a technology neutral way. But they will need amendment to ensure that they apply appropriately in an AI-enabled world.

Below we set out some examples of the kind of law reform that may be required and legal issues that will need to be considered. It is not comprehensive (which would require more time for consultation) but gives some indication of where a Law Reform Stream might start.

Administrative decision-making

The Australian Law Reform Commission is already looking to a possible future project in this area, and we encourage government to pursue this.

Discrimination

While much has been written about bias in AI systems, in an Australian context the relevant legal framework is in the various anti-discrimination statutes. Reform is needed to encourage, rather than discourage, measurement of the disparate impact of AI systems on disadvantaged groups in order to facilitate conscious decision-making around diversity and the meaning of “fairness” in different contexts. There is an extensive literature exploring the challenges, including most recently the Australian Human Rights Commission’s technical paper “Using artificial intelligence to make decisions: Addressing the problem of algorithmic bias”.

One particular challenge that discrimination law will need to address is the question of proxy discrimination (indirect statistical discrimination), which is discrimination based on a facially-neutral characteristic, that correlates with a protected class.³⁵ For the proxy discrimination to occur, the usefulness of the facially-neutral practice must derive (at least partly) from the fact it leads to discrimination of a protected class.³⁶ Examples of proxies include hair texture for race, school attended for ethnicity or religion, car engine size for gender etc. The use of AI techniques fundamentally changes the risk of proxy discrimination. Part of the problem is that, for attributes protected in discrimination law, the relevant variables may have been removed which prevents testing for proxy discrimination.

Our ongoing research on proxy discrimination in the consumer insurance context demonstrates how current anti-discrimination laws are largely inadequate to address the issue of algorithmic proxy discrimination. This is because the focus of the anti-discrimination legislation is on the discrimination being intentional and rational, and in the case of the insurance exemption, reasonable ‘actuarial or

³⁵ Edward W. Frees, Fei Huang, 'The Discriminating (Pricing) Actuary' (September 30, 2020) 11, available at SSRN: <https://ssrn.com/abstract=3592475>.

³⁶ Anya E.R. Prince, Daniel Schwarcz, 'Proxy Discrimination in the Age of Artificial Intelligence and Big Data' (2020) 105 *Iowa Law Review* 1257, 1261.

statistical data' or other reasonable basis for discrimination is required.³⁷ Furthermore, in order to bring forward a private action, insureds would first need to realise that they are being discriminated against.³⁸ Identifying discrimination in an automated decision-making context is an inherently comparative exercise that is at odds with the information asymmetry afforded to a consumer who knows neither whether an AI model was used to determine pricing nor what inputs were considered. And then even if disparity were identified, the lack of explainability in AI models beyond correlative predictions renders the challenge to establishing the existence of proxy discrimination equally difficult for victims.

Reform of discrimination law is crucial to ensure that legislation is structured in a way that incentivises, rather than disincentivises, those using AI tools to conduct appropriate evaluations, including as to the possibility of proxy discrimination. Where, as in the case of insurance, there are different legal requirements that are sector-specific, sector-specific law reform may be required.

Privacy law

New data technologies and developments in data science (including in relation to re-identification) create a need to reconsider the *Privacy Act 1988*. This is currently subject to a separate call for submissions, so we have directed our comments there.

Consumer protection

Chapter 8 of Guihot and Bennett Moses' 2020 work on AI, robots and Australian law³⁹ provides an explanation of problems and concerns relating to AI and consumer protection, particularly in the area of consumer manipulation. Therefore, here we will only provide a short summary of the issues they raise.

In the recent Digital Platform Inquiry, the ACCC raised concerns about the impact on consumers of their 'collection of location data, online tracking for targeted advertising purposes, and third-party data-sharing practices'.⁴⁰ The utility of tracking, collection and processing of data is perceived to be given additional powerful impetus by the use of AI techniques such as machine learning, as it can allow the processing of large amount of data in order to provide inferences on consumer behaviour derived from that data. This can cause significant power imbalances and information asymmetries between the average consumer and digital platform businesses who are looking to leverage this data to influence consumers' purchasing patterns, including buying goods and services that they would not have otherwise have bought, or to accept onerous terms and conditions that they otherwise would have found unacceptable. The ACCC Report noted in relation to targeted advertising that '[d]etailed online profiles about consumers can be used to influence their behaviour, which causes consumer harm from risks associated with manipulation and loss of autonomy'.⁴¹ Mik cautioned that the large amounts of data collected from consumers 'places businesses in a position of unprecedented transactional advantage derived from this new 'information asymmetry'.⁴² The ACCC Report noted that:

³⁷ See *Age Discrimination Act 2004* (Cth) s 37; *Anti-Discrimination Act 1977* (NSW) ss 37, 49Q, 49ZYT; *Anti-Discrimination Act 1991* (Qld) ss 73-75; *Anti-Discrimination Act 1996* (NT) s 49; *Anti-Discrimination Act 1998* (Tas) ss 30, 34, 44; *Disability Discrimination Act 1992* (Cth) s 46; *Discrimination Act 1991* (ACT) s 28; *Equal Opportunity Act 1984* (SA) ss 49, 85, 85R; *Equal Opportunity Act 1984* (WA) ss 34, 66T, 66ZR; *Equal Opportunity Act 2010* (Vic) s 47; *Sex Discrimination Act 1984* (Cth) s 41.

³⁸ See e.g. s 41(1)(e) of the *Sex Discrimination Act 1984* (Cth) in the context of gender-based discrimination.

³⁹ Michael Guihot and Lyria Bennett Moses, *Artificial Intelligence, Robots and the Law* (LexisNexis, 2020)

⁴⁰ Australian Competition and Consumer Commission, 'Digital Platforms Inquiry' (Final Report, June 2019) <<https://www.accc.gov.au/system/files/Digital%20platforms%20inquiry%20-%20final%20report.pdf>>

⁴¹ *Ibid* 445.

⁴² Eliza Mik, 'The erosion of autonomy in online consumer transactions' (Pt Routledge) (2016) 8(1) *Law, Innovation and Technology* 1-38

Online profiling may enable companies to negatively target or exclude customers based on vulnerabilities, or to exploit or exacerbate vulnerabilities and trigger irrational behaviours in consumers. Different advertisements may also be targeted to consumers based on algorithmic determinations of a user's emotional state. ... Google also owns a patent that would help search engines return results based on a user's current emotional state, which may be identified in various different ways - including a camera and facial recognition program, a microphone, or a monitoring device connected to the user such as a smartwatch.⁴³

A recent analysis undertaken by Manwaring of current Australia consumer protection law concluded that Australian Consumer Law (ACL) provisions on misleading and deceptive conduct and unconscionable conduct are currently inadequate to appropriately protect consumers against this form of consumer manipulation. Reforms recommended in this paper include support of a general ACL provision on unfair conduct, with the addition of specific examples and mechanisms for speedy and informed regulatory responses to changing sociotechnical practices.⁴⁴

Civil liability

One of the areas where law reform could be proposed is civil liability. AI systems may pose challenges to the civil liability regimes, as in some cases it may be difficult to determine who was in control of the 'actions' of the AI system, and therefore should be liable for the harm and damage caused.⁴⁵ Many AI systems are opaque to end-users, whether due to a deliberate attempt to protect proprietary information, because they require sophisticated technical knowledge to be understood, or due to complexity and *emergent* behaviours.⁴⁶ Emergent behaviours are ones that cannot be predicted even by the original programmers themselves. This opacity of AI systems is exacerbated by the high number of actors involved in creating and operating them, particularly in the context of cyber-physical systems. The 'fault' may lie in the software's decision-making, the hardware, the product itself, any related services, the data used to train the algorithm, data collected by the device, or the corruption of data due to environmental conditions or other causes.⁴⁷ In consequence, in some cases allocation of liability may be difficult or impossible, for example where the victim cannot prove the fault of the any of the suppliers, an interfering third party or the operator of the system.

Consideration thus needs to be given to the possibility that the Australian civil liability regime will require reform. There are ways to apply existing rules to make natural and legal persons accountable for harm and damage caused by AI systems. This is not a call for AI to be treated as legal persons, rather a need to ensure *human* accountability. This is something that other jurisdictions are working on, for example the European Union.

Legal services regulation

Another area that will need reform is legal services regulation. To support the uptake of AI in this sector, as an example of a key professional service, the government will need to pursue and balance several objectives. The main objectives are providing safeguards for consumers, certainty for users and regulators, and fairness between those who are currently subject to professional regulation (lawyers) and those who are not (non-lawyer legal service providers).

⁴³ Australian Competition and Consumer Commission (n 40) 516.

⁴⁴ Kayleen Manwaring 'Will emerging information technologies outpace consumer protection law? The case of digital consumer manipulation' (2018) 26(2) *Competition and Consumer Law Journal* 141

⁴⁵ Iria Giuffrida, 'Liability for AI Decision-Making: Some Legal and Ethical Considerations' (2019) 88(2) *Fordham Law Review* 439, 443-444.

⁴⁶ Jenna Burrell, 'How the Machine "Thinks": Understanding Opacity in Machine Learning Algorithms' (2016) *Big Data & Society* 1, 3-5; Will Knight, 'The Dark Secret at the Heart of AI' (2017) 120 *MIT Technology Review* 54, 56.

⁴⁷ Kayleen Manwaring, 'Emerging information technologies: challenges for consumers' (2017) 17(2) *Oxford University Commonwealth Law Journal* 265, 272-3.

For AI LegalTech products offered direct to consumers (as distinct from where they are used by lawyers), there are significant concerns that law reform could address. For the consumer, the legal product or service may be of lesser quality, and there will be fewer, if any, recourse options in the event that it or its use causes loss. From the side of regulators, and LegalTech providers, if the product or service is offered independent of legal practitioners, it may breach prohibitions on unauthorised practice of law. In all states of Australia, practising law in the absence of qualification and registration as a lawyer is an offence.⁴⁸

For AI LegalTech products used by lawyers and their firms, the current arrangements in which the lawyer remains accountable for any lapses in the AI that they use when providing legal services place lawyers and firms in an uncertain position. It is unclear whether client consent could be effective to limit the legal practitioner's liability. There is also uncertainty around specific issues: for instance, if a legal service wanted to make an AI LegalTech tool freely available to consumers on its website, it seems likely that existing professional standards would all apply, some of which would present hurdles to implementation, such as the management of client conflicts. Therefore, although automation might present opportunities to enhance access to justice through decreasing the cost of providing legal services, lack of clarity as to how the current regulatory system applies presents a barrier.

Finally, and affecting all parties – consumers, practitioners, law firms and tech entrepreneurs (who may also be lawyers, as noted above), in Australia, only legal practitioners may give legal advice. Earlier case law has tended to differentiate legal advice as involving advice that is tailored to a client's specific circumstances as opposed to generic legal information but this may not be a useful distinction when it comes to sophisticated AI. Concern or uncertainty around the regulation of LegalTech may therefore also act as a disincentive to develop new products or services. Through our research, FLIPStream has identified some regulatory options that could be considered at the appropriate time.⁴⁹

Lowering barriers to entry for business and government

There are likely to be many ways in which barriers to entry can be lowered. Due to the extremely short timeframe of this consultation, we have been only able to provide a couple of specific suggestions, in the areas of law and policy.

First, as intellectual property law is used to incentivise business development, its fitness for this purpose in relation to AI must be assessed. *AI applications created by humans* are likely to be given protection (and therefore provide value and incentives to businesses in this industry) under Australia's intellectual property laws, most notably under the Copyright Act or the Patents Act. However, some consideration should be given to whether protection of software under the Copyright Act is sufficient, given the difficulty of obtaining a valid patent grant for software under the Patents Act.

Intellectual property protection of products created *by the AI applications themselves* is much less certain. AI-generated works are generally not protected under copyright law in Australia, as a result of decisions such as the Full Federal Court decision in *Telstra Corporation Limited v Phone Directories Company Pty Ltd* [2010] FCAFC 149. In this case, it was decided that works must be created by a human author to attract copyright under the Copyright Act. In other jurisdictions, such as the United Kingdom, relevant legislation has been modified to attribute authorship to those who have arranged

⁴⁸ Eg, Legal Profession Uniform Law ss 10-12. See also Emma Beames, 'Technology-Based Legal Document Generation Services and the Regulation of Legal Practice in Australia' (2017) 42(4) *Alternative Law Journal* 297.

⁴⁹ Felicity Bell and Justine Rogers, "'Fit and Proper' Coders? How Might Legal Service Delivery by Non-Lawyers Be Regulated?', *Legal Ethics* (forthcoming).

for the work to be created.⁵⁰ In relation to an inventor of ‘patentable subject matter’ under the Patents Act, there has been no clear legislative or judicial statement on whether a non-human can be an inventor, and whether or not an invention created by a non-human would be capable of having a patent granted. We are left with legal commentary that concludes, at best, that the outcome is uncertain, and that we need reform to clarify the issue.⁵¹

The recent removal of the option of an innovation patent, with its lower thresholds in terms of patentability and cost, may also exacerbate these issues. Software innovation is often incremental rather than progressing in inventive leaps, and therefore this may exclude many applications from patent protection. Patent protection is rightly seen as more valuable to funders than copyright protection, due to its protection of function rather than form.

Where intellectual property protection is uncertain, value propositions for technology businesses, and therefore access to funding, are likely to be significantly reduced.

The Issues Paper has also raised the problems of funding of start-ups and ensuring that businesses have access to the AI workforce needed, particularly where there are skills gaps in areas such as technical and business management skills. Significant gender bias in the offering of funding to start-ups is well-documented, leading to negative impacts for women entrepreneurs.⁵² Addressing these issues – for example by government incentives – will have the potential to open up a large part of an untapped entrepreneurship and employee pool.

Yours sincerely,

Felicity Bell, Lyria Bennett Moses, Zofia Bednarz, Michael Legg, Kayleen Manwaring, Justine Rogers (listed in alphabetical order) – Allens Hub for Technology, Law and Innovation at UNSW including FLIPStream

Jackie Leach Scully – Disability Innovation Institute at UNSW

Marina Yastreboff – for the Australian Society for Computers and Law

⁵⁰ Section 9, *Copyright, Designs and Patents Act 1988 (UK)*. See also A Wiseman and B Workman, ‘Copyright in the Age of Artificial Intelligence and Authorless Works’ (2019) 32 (3 & 4) *Australian Intellectual Property Law Bulletin* 34.

⁵¹ A Modkova and H Vara, ‘The Robot Revolution – Reinventing Inventorship’ (2018) (111) *Intellectual Property Forum: Journal of the Intellectual and Industrial Property Society of Australia and New Zealand* 11; Nick Li, Tzeyi Koay, ‘Artificial intelligence and inventorship: an Australian perspective’, *Journal of Intellectual Property Law & Practice*, Volume 15, Issue 5, May 2020, 399

⁵² See eg Michael Ewens and Richard R Townsend, ‘Are early stage investors biased against women?’ (2019) 135(3) *Journal of Financial Economics* 653.

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