

Between Constancy and Change: Legal Practice and Legal Education in the Age of Technology

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ABSTRACT

In legal practice, as in other professions, the increasing use of technologies is not new. However, it is generally agreed that the latest round of new technological development, such as AI and big data, has presented, and will continue to present, challenges to the legal profession in a much more profound way. If the legal profession must adapt to technological changes, so must legal education. Technologies in legal education present us with three sets of considerations: the adoption and adaptation of technologies to teaching and learning; the study and research of disruptions and other impacts of technologies in society to assist in formulating legal responses to them; and the preparation of future lawyers. This paper first examines the impact of different technologies on legal practice and responses from the profession. Upon examining the opportunities and challenges brought about by new technologies, the paper will further discuss how legal education, especially its curricula, might respond to changes and challenges. It is argued that, like the way they adapted to globalisation, legal education and legal practice will meet new technological challenges and, as such, there is no reason to believe that there is not a bright future for legal education and the legal profession.

Keywords – *Legal education, Technology, AI, Curriculum, Learning and Teaching, Legal Profession*

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1. INTRODUCTION

Developments in technology in the last few decades have changed the way people communicate, revolutionised business processes and further propelled globalisation. The legal profession, though not generally responding to changes quickly, is increasingly recognising that changes are inevitable. In legal practice, as in other professions, the increasing use of technologies to maximise efficiency and productivity and to improve communication is not new. However, the latest round of new technological developments, such as AI and big data, has presented, and will continue to present, challenges to the legal profession in a much more profound way.

Ever since AlphaGo beat a 9-dan professional Go player in March 2016, we have been hearing frequently that artificial intelligence (“AI”) is changing everything, the doomsday is closing in, and an “AI apocalypse” is perhaps already upon us (Ferose and Pratt 2018)¹. More recently, consultancy group McKinsey has estimated that 22 per cent of a lawyer’s job and 35 per cent of a law clerk’s job can be automated (Winnick 2017). Another report by Deloitte has suggested that 40 per cent of all law jobs are at risk of automation (Deloitte 2016, Krook 2018). Obviously, predicting the future in this technological age is difficult, if not impossible, as the Universities Australia (2018) has recently conceded that “[t]he economy – and the labour market – are changing at breakneck speed. It is impossible to predict the full impact of the current structural shifts.”² Nevertheless, research seems to confirm that, at least, between 13 per cent and 23 per cent of lawyers’ tasks could be automated (Law Society of Western Australia 2017). Although it is agreed that there will not be a sudden “big bang” change, it is also suggested that the eventual impact will be radical and pervasive (Susskind and Susskind 2015, p. 231).

In fact, as early as 2013, Susskind had predicted that changes to the legal industry would be more radical in the next two decades than those in the last two centuries (Susskind 2013, p. xiii)³, and without much doubt

the greatest transformation has been brought about by technological innovations (Canick 2014). It should, however, be recognised that, as the Foundation for Young Australians (2017, p. 9) has rightly pointed out, although occupations such as lawyering are identified as most likely to be affected by modern technologies,⁴ automation and globalisation will affect every job. In other words, lawyers are not alone in facing serious challenges brought about by the rapid development of technologies.

It may seem alarmist, but it is not unreasonable to ask whether legal practice and, by implication, legal education, is doomed, as a result of the application of modern technologies. The answer will very much depend on how the legal profession adapts to the new environment, as it is succinctly stated by the Law Society of Western Australia (2017, p. 6) that “... the difference between those who will thrive in the future legal profession and those who will struggle will largely revolve around who adapts best to technological changes.”

If the legal profession must adapt to technological changes, so must legal education. Conversely, how legal education responds to technological development will also determine the future of legal practice in many significant ways.

This paper first examines the impact of technologies on legal practice and responses from the profession. Upon this examination, the paper will then discuss how legal education, especially its curricula, might respond to changes brought about by technologies, so as to ensure that future students will not only receive intellectual cultivation but also acquire sophisticated skills that are transferrable and adaptable in the age of technology.

2. ADOPTION AND APPLICATION OF TECHNOLOGIES IN LEGAL PRACTICE

2.1 OVERVIEW OF CURRENT PRACTISE

Legal practice is generally considered to be a conservative profession. However, the huge expansion of legal education in the last 30 years or so in Australia and elsewhere means

¹ Of course, 2016 was not the year we began to hear such warnings; we had heard them much earlier. See further discussion below.

² See also Perlman (2018). For some of the recent predictions, see College of Law (2018), Neuberger (2017), Lat (2017).

³ A second edition of the book was published in 2017. Susskind and Susskind (2015) also extended this study to include all major professions.

⁴ But it is claimed by some that the legal profession is one of the most disrupted sectors of the consulting industry today. See Fenwich et al. (2014, p. 354).

fierce competition for business among law firms, big and small.⁵ It is against the backdrop of this competition that the adoption of technologies in legal practice becomes inevitable (Vogl 2016), despite the fact that the adoption of technologies is more likely to reduce the “billable hours” — the essence of business for most law firms.

The application of many of the new and emerging technologies improves economic efficiency and productivity. While many of them are replacing the standard and routine work of lawyers (especially paralegals and researchers), other technologies are assisting in establishing deep insight (such as that facilitated by the use of big data) that was not available before.⁶ AI is developing rapidly, making inroads into various areas of the traditional legal practice, from assisting in performance of due diligence, to legal writing to predicting results.⁷

The application of technologies not only leads to changes within traditional law firms, but also leads to the emergence of the so-called “New Law”, that is, new forms of legal practice that are hybrid practice combining elements of traditional law firms with new business models made available through the use of technologies, including the various online legal services and virtual law firms.⁸ In Australia, a law firm exclusively using AI to provide tax and estate law services was launched in 2017.⁹ As such, it has been claimed by some that AI will cause the “structural collapse” of law firms and threaten the “very existence of the profession”.¹⁰ More recently, it has been “revealed” that the latest area in which AI outperforms

humans is in reviewing legal documents (Leary 2017). In a controlled environment resembling how lawyers work, AI and 20 lawyers reviewed the same Non-Disclosure Agreements to identify risks associated with the documents. The accuracy rate for AI was 94 per cent, whereas the average for lawyers was 85 per cent. On average it took 92 minutes for the lawyers to review the documents, but AI only required 26 seconds.¹¹ Similarly, when AI and lawyers were asked to predict the success of claims, AI once again beat the lawyers by more than 20 per cent, achieving 86 per cent accuracy.¹²

The ILTA 2018 Technology Survey reports that all the large law firms with more than 700 attorneys which participated in the survey indicated that they are pursuing AI and Machine Learning projects (International Legal Technology Association 2018). AI is, however, only one of many modern technologies that are being introduced into legal practice. Treating technological advancement as one of the greatest issues facing the legal profession, the Law Society of Western Australia provides the following illustrations:

*New technologies available include cloud computing; electronic document management systems; artificial intelligence, virtual law firms; online dispute resolution; electronic courts and electronic filing of court documents; use of social media and blockchain — just to name a few.*¹³

There is little doubt that each of the modern technologies will have a major impact on law, legal practice, and the legal profession generally, and together their impacts will be massive.¹⁴ At the same time, each of the technologies presents

⁵ In Australia, there were only 21,623 legal professionals (including judges, magistrates, barristers, solicitors and legal officers) in 1986. By October 2016, there were 71,509 practising solicitors in Australia. The 2016 statistics are based on: The Law Society of New South Wales (2017); the 1986 statistics are based on the Australian Bureau of Statistics 1947-1986 Census of the Commonwealth of Australia (ABS, Canberra) quoted in Anleu (1991).

⁶ For an outline of specific activities where technologies are being utilised, see Law Society of New South Wales Commission of Inquiry (2017). For a brief introduction of new technologies being used by large Australian law firms, see Moses (2018), Boran (2018), Marr (2018), Ferose and Pratt (2018).

⁷ See Goodman (2016), Rayo (2017), Donahue (2018). For a detailed examination of AI in four specific areas, see United States Government Accountability Office (2018).

⁸ For a detailed study of the various “virtual” and online legal practices, see Law Society of New South Wales Commission of Inquiry (2017, ch. 3).

⁹ The service is called the Artificially Intelligent Legal Information Research Assistant (“Ailira”). See Davis (2017). The Ailira website suggests that it is expanding its business scope: <https://www.ailira.com/>. Virtual law firms were not a new species in legal practice in 2017. See further discussion below.

¹⁰ See the various claims referred to in Law Society of Western Australia (2017).

¹¹ The experiment was conducted by LawGeex, a leading AI contract review platform. See Leary (2017)

¹² The “Case Cruncher Alpha”, conducted in the UK, see Davis (2017).

¹³ Law Society of Western Australia (2017). For an excellent and detailed study on the use of technologies and their impact on legal practice, see Fenwich, Kaal and Vermeulen (2017). See also Susskind and Susskind (2015, p. 66-71).

¹⁴ In addition to a large number of academic studies, two reports by the legal profession are of particular relevance to the understanding of the impact of technologies on legal practice, the legal profession and legal education in Australia: Law Society of Western Australia (2017) and Law Society of New South Wales Commission of Inquiry (2017) FLIP Report. Outside Australia, see American Bar Association Commission on the Future of Legal Services (2016). It should, however, be pointed out that there are also dissenting views that believe that such talk about disruption of the legal industry by technologies is significantly exaggerated, see Vogl (2016).

different challenges that legal practitioners must address, ranging from the protection of clients' confidential information to privacy protection (especially in cases of breaches of network security), from automated interpretation of data to lawyers' ethical obligations in assessing such interpretations, and from allowing public access to big data to "legal services" provided by non-lawyers in the use of law-related AI tools (Law Society of New South Wales Commission of Inquiry 2017, FLIP Report).

It would be wrong to assume that technologies only or mainly affect legal practice in its narrow meaning. Courts and tribunals are equally under pressure to change, to adopt and to utilise technologies, and to "modernise" themselves. Indeed, we are witnessing paperless trials, online dispute resolution, e-filing, e-Court, e-discovery, and many other e-practices as part of the formal court processes.¹⁵ In the United States, using algorithms to assess the likelihood of recidivism or rehabilitation has been adopted to assist judges in sentencing for many years (Monahan and Skeem 2015). Needless to say that technologies are also increasingly applied by government agencies to automate certain decision-making.¹⁶

2.2 IMPACT AND CHALLENGES

As already mentioned, among all modern technologies, AI has currently presented the deepest and most profound impact on law, legal practice and legal education.¹⁷ The impact of AI is far more than improving efficiency and productivity: AI has the potential to replace lawyers in many of the traditional areas of practice, and indeed, it is generally agreed that AI can be more accurate and efficient in tasks demanding high technical skills.¹⁸ As such, the advancement of AI technologies and their application can be seen as threatening jobs and opportunities. This is especially so if AI is examined from a developing perspective: at the moment,

it is generally agreed that AI would replace low-level skills, thus impacting on paralegal and junior lawyer jobs (Marr 2018). But in the longer term, it is also agreed that AI could replace some high-level skilled roles currently performed by lawyers (Deloitte 2018).

Lawyers have a duty to provide their services competently, and, in the age of technology, they are consequently expected to be competent in the use of modern technologies (Law Society of New South Wales Commission of Inquiry 2017, FLIP report). This then begs the question: have lawyers discharged such a duty if they have rendered their services with the assistance of technologies (such as AI) but have no basic understanding of how such technologies work? (Law Society of New South Wales Commission of Inquiry 2017, p. 41). Not surprisingly, the American Bar Association now requires, through its Model Rules of Professional Conduct, that lawyers' duty of competency includes understanding changes in technology, and many states in the United States have now adopted a rule to this effect, requiring technology-specific learning in continuing professional development.¹⁹ There are also some implicit suggestions in practice notes issued by Australian courts (such as the Federal Court of Australia and the Supreme Court of Victoria) that lawyers are expected to have some basic understanding of technology in a legal context, at least in terms of the application of technologies.²⁰ It seems that, in the age of technology, legal practitioners need not only consider economic efficiency and productivity, they actually need to be competent in technologies. Importantly, as the FLIP Report clearly revealed, clients expect that technologies are used by law firms and that lawyers are competent and sophisticated in the use and application of these new technologies (Law Society of New South Wales Commission of Inquiry 2017, FLIP report, p. 24-26).²¹

¹⁵ For a summary of these applications, see Law Society of New South Wales Commission of Inquiry (2017, ch. 5) FLIP Report.

¹⁶ For a discussion on the application of technology by government agencies, see Moses (2018).

¹⁷ Others, however, believe that blockchain technology will be the most important technological innovation to impact various services industries. See Fenwich, Kaal and Vermeulen (2017, p. 263).

¹⁸ See Boran (2018), Marr (2018), Ferose and Pratt (2018).

¹⁹ The American Bar Association amended Rule 1.1 Comment of the Model Rules of Professional Conduct in 2012 to include a competence component in relating to technology. It can be accessed at <https://www.americanbar.org/groups/professional_responsibility/publications/model_rules_of_professional_conduct/rule_1_1_competence/comment_on_rule_1_1/>. For further discussions, see Law Society of Western Australia (2017).

²⁰ See, eg, Federal Court of Australia (2016). See also Horton (2017).

²¹ The FLIP report, while acknowledging competition and changing client expectations as other important reasons for the adoption of technologies, insists that "the most compelling reason for lawyers to take an interest in the technology is because the right tools optimised to a lawyer's needs and individual practice ultimately made the job far more enjoyable, and far more effective and efficient" (2017, p. 31).

Legal practice is not all about technical matters and skills; it is fundamentally about achieving justice and fairness through not only interpreting and applying the law, but also by advancing the law with empathy, compassion, and a strong sense of justice and ethics. Lawyers need to be masters, not servants, of technology.²² Even in interpreting and applying the law, technical skills and rules—the underlying mechanisms for AI technologies in law—are in fact rules laid down by human beings.²³ These technologies and mechanisms create their own risks and limitations, and understanding these risks and limitations is critical for legal practice (Moses 2018).

In many ways, data analysis algorithms thus far are mostly advanced methods of statistics. It is human beings who continue to control what data is entered and how to interpret the results produced. Also important, as the Australian Human Rights Commission has pointed out, AI can entrench or even exacerbate gender bias and stereotyping (and thus inequality) when it is used as a tool of “predictive policing,” or other AI-based decision-making.²⁴ Research has demonstrated that, when using AI for sentencing, black people will likely be treated as presenting a medium or high risk of re-offending (and thus be more likely to attract a custodial sentence or a longer sentence) because of past data suggesting that is the case.²⁵ Although infringement notices, whose offences are relatively minor but the sanction against which accounts for more than 90 per cent of criminal matters, are already determined by algorithm in Australia (Lansdell et al. 2012, Bagaric 1998) to adopt algorithms to determine sanctions against more serious crimes which may attract custodial sentence need further considerations.²⁶ Relying on technology alone can lead to injustice, whether we are dealing with big data or applying AI technologies. Human beings must remain in the driving seat. While recognising that AI systems and human beings have different strengths and weaknesses, only prudent combination with a well-designed and thoroughly

vetted AI system to assist human decision-making may reduce bias in practice.²⁷

Further, in terms of the nature of technology, a useful distinction is made between automating (sustaining applications of technology) and innovating (disruptive applications of technology) (Law Society of New South Wales Commission of Inquiry 2017, p. 36). Simply put, automation will improve efficiency as well as accuracy, but innovation will present entirely new methods of lawyering. Neither, however, can be based on human experiences, nor do they “replicate human processes of reasoning, judgement and intuition” (Google ND, p. 36-41), or possess such human elements as the capabilities of creativity, empathy, compassion, and emotional intelligence (Krook 2018). That is where the limit of technologies lies, at least for now, and where constancy and change coexist.

3. CHALLENGES TO LEGAL EDUCATION

3.1 AN OVERVIEW

As discussed above, it is principally competition that has forced law firms to adopt and adapt to new technologies. Similarly, efficiency and productivity are among the major considerations for the application of technologies in university teaching and learning. Such an application is, however, only a small part of the challenges that universities face today. A much more fundamental issue is how universities will produce graduates who are capable of adapting to technology, but also understanding of the underlying principles of the applied technology.

At the same time, however, technologies have brought about many previously unknown consequences that need legal responses. This provides opportunities for research or, more precisely in the current funding environment, more research funding opportunities. From a legal perspective, the adoption

²² See Nussbaum et al. (2018), Kirby (2018), Krook (2018).

²³ See discussions in Ashley (2017). It analysed, among other things, the implementation of different technological methods to obtain data and the use of rule-based approaches to classify statutory provisions.

²⁴ Australian Human Rights Commission (2018, p. 7 & 28-30). See also Moses (2018, p. 360-362).

²⁵ See Australian Human Rights Commission (2018, p. 29). The Issues Paper lists many more such examples (pp. 28–30). See also United States Government Accountability Office (2018).

²⁶ Stobbs, Hunter and Bagaric (2017) have taken a favourable view on using AI in sentencing, however, they have also suggested that precaution needs to be taken and wide ranging and rigorous trial of the process is essential. On the other hand, Freeman (2016) has taken a very critical view on using algorithms in sentencing by the US courts.

²⁷ See for a general discussion Google (ND, p. 21-26).

and application of technologies and their impact on society also lead to the regulation of them. This naturally means both challenges and opportunities in teaching, research and global collaboration. In this sense, modern technologies truly present challenges as well as opportunities, and it is critically important that we keep in perspective that the application and regulation of technology are, at least at the moment, at the centre of our concern.

In a nutshell, technologies in legal education present us with three sets of considerations: the adoption and adaptation of technologies to teaching and learning; the study and research of disruptions and other impacts of technologies in society to assist in laying down new laws to regulate them; and the preparation of future lawyers. Each of these issues is considered in turn.

3.2 THE ADOPTION AND APPLICATION OF TECHNOLOGIES IN TEACHING AND LEARNING

We have long ago thrown away notepads and note cards. Nowhere can we find the old-style overhead projectors in classrooms these days. In their place we find computers and computer-linked projectors. Libraries are nowadays dominated by discussion rooms and work stations and, of course, the all-important café. Books are mostly held in storage, rather than on bookshelves, and e-books are generally welcomed by both students and academics.²⁸ These are some of the most basic indications of the adoption of technologies in teaching and learning. In fact, we have much more fundamentally changed the way we deliver our teaching, with blended learning, flipped classrooms and online delivery as typical examples of such changes, as well as many more other experimental and innovative methods of teaching delivery.²⁹

Law schools globally are adopting increasingly sophisticated computer tools in teaching and learning.³⁰ However, the application of technologies in legal education is primarily driven by technicians and university managers, whose principal considerations are long-term economic efficiency and

productivity.³¹ Further, one could also argue that the adoption of technologies meets the demands of the students who take a rather different path in their approach to university learning and in their understanding of university experiences. After all, “student-centred learning” seems to be the catchphrase in today’s higher education.

The application of technologies in teaching and learning, in addition to sustaining economic efficiency and productivity in the long run, creates opportunities and challenges. There is little doubt as to the benefit of massive open online courses (“MOOCs”) in providing opportunities to many students who would otherwise not be able to access legal education.³² At the same time, we as legal educators also grapple with many difficulties, and some of them challenge the assumptions of the purposes of education in general.

The application of technologies, especially blended learning and online delivery, often leads to a major problem — that students stay away from campuses. The Australian Department of Education and Training has thus conceded that, in its own words, “digital learning environments can result in lower student retention rates” (Department of Education and Training 2018, p. 5). Face-to-face discussion and debate, interpersonal networking and socialising, extracurricular activities (and skills), critical debate about the value of justice and morality, and so on — all once part of the most valuable university experiences — are increasingly absent from the learning experiences of many students. One wonders whether human exchanges and experiences on campus truly are timeless values in education.

In addition, teaching law is not all about helping students to understand black-letter law, though it is an important part of legal education, it is also about inspiring students to pursue a better future of the world. For thousands of years we have had books that cover far more knowledge than a single teacher or group of teachers can possibly have, but we still go to university. Technology can certainly change the way we teach and learn, and technology-aided delivery might in

²⁸ For discussion on e-book preference, see Library Journal (2018).

²⁹ For some recent discussions on the use of technologies in law teaching, see Ryan (2018), Hiller (2018), Buchan, Cejnar and Katz (2018).

³⁰ For a detailed discussion, see Binford (2014).

³¹ It seems that law academics are reluctant to embrace and disinterested in embracing technology-based teaching methods. See Binford (2014, p.165–9). See also Canick (2014, p. 675–80), Fenwich, Kaal and Vermeulen (2017, p. 353). Although the discussion in the latter two articles is in an American context, it is largely true in Australia as well.

³² See the detailed discussions in Buchan, Cejnar and Katz (2018).

fact be more engaging, but can these changes replace the benefit of face-to-face communication?

It is reasonable to say that the adoption of technologies in teaching and learning has had mixed results, and that much improvement remains desirable. As Fiona McLeod SC (2018, p. 504), the then President of the Law Council of Australia, has reminded us:

I would urge that there is still a place for aural learning in the physical classroom. That by speaking and listening we use different neural pathways imbedding deep memory; deeper memory than by watching or distracted listening.

3.3 REGULATION OF THE USE OF TECHNOLOGIES, AND OPPORTUNITIES FOR LEGAL RESEARCH

Technologies present both risks and opportunities, and law must respond to technological developments accordingly. An example that demonstrates two starkly contrasting sides of technology is big data and its application. The potential benefits of big data are obvious, and are to be welcomed. LexisNexis, for instance, now holds more than 60 billion documents and 2.5 petabytes of legal data in its data platform (Wilkins 2017). Access to such large databases is invaluable to lawyers, researchers and students. But there are other kinds of large databases that hold extensive personal information, some of which has not necessarily been collected legally or ethically. The personal information harvested from more than 80 million Facebook profiles without their permission by data analysis firm Cambridge Analytica is a case in point (Isaak and Hanna 2018).

These databases of personal information, collected legally or otherwise by private companies and governments, are also liable to breach and the data therein misused and abused. The recent security breach of a medical database in Singapore is another example of why large databases of personal information are of concern (Davies 2018). Here once again, the issues presented are multifaceted and multidimensional, complicated and inter-related, and ultimately have fundamental concerns for the protection of human rights.³³ Much research is needed in relation to cybercrime and cyberterrorism, privacy, genetic

profiling, online bullying, online racism, big data breaches and regulation, and many other areas.³⁴

Another disruptive technology blockchain, the invention which underlies cryptocurrency such as Bitcoin and smart contracts, has also caused great difficulties for regulators (Walch 2016, Fulmer 2019). As an efficient and secure tool which can be used to record transactions, decentralisation in blockchain challenges many industries as well as government worldwide.

In addition, developments in biomedical and bioengineering have presented fundamental ethical issues which are yet to be addressed by regulators. The gene-edited baby claimed by Chinese scientist Jiankui He in late 2018 has caused outrage worldwide (Saey 2018). Should parents be allowed to choose using genome editing to prevent disease or improve intelligence or physical characteristics of unborn babies?³⁵ In other areas of controversy, such as stem cell therapies and cloning, most countries are yet to reach consensus and lay down laws to regulate them. Even technologies which have been around long enough and subject to regulation, such as genetically modified (GM) foods, or reproductive technology such as IVF, are still topics of ongoing public debate. We are not only grappling with understanding new technologies, we are also frequently being presented with timeless ethical questions as new technologies emerge and are applied. Can law really address some of the most fundamental ethical issues presented — is the use of those technologies playing God? Adding to the list are of course issues concerning equal access to technologies as well as issues relating to the impacts of technology on law and legal practice.

While technologies present risks, they also present massive opportunities for research, especially for collaborative research internationally, as most countries would face more or less the same problems. Thus, just as it happened in the United States a few years ago (Canick 2014, p. 680), large-scale initiatives and centres have now begun to emerge in Australian universities and, very encouragingly, some of these initiatives are in cooperation with the legal industries.³⁶ Additionally, technologies offer us various tools and mechanisms

³³ An excellent start to understanding the scope and depth of technological impact on society and people is Australian Human Rights Commission (2018).

³⁴ See Australian Human Rights Commission (2018); Rule of Law Institute of Australia (2016).

³⁵ For general discussion, see Knoepfler (2016).

³⁶ See, for example, UNSW Media (2017) and Ormsby (2018).

for research, well beyond “finding the law” (Galloway 2017). They also promote the dissemination of knowledge, facilitate circulation of research results, and assist in international collaboration for research. Here once again, we continue to see constancy and change coexist without much controversy: we now apply new technologies to undertake research and disseminate results, but the fundamental purpose of research remains the same — that is, to advance our understanding of law and society through scholarship and knowledge.

3.4 CHALLENGES TO LEGAL EDUCATION — TECHNOLOGIES AND CURRICULUM DESIGN

The most fundamental and difficult challenge to legal education is not about utilising technologies in teaching, learning and research, although that is useful, it is the question of how legal educators prepare law graduates for future practice, not just as lawyers but also as practitioners in law-related fields. This seemingly simple question is deceptively misleading; to answer this question, if we do not do so in a simplistic manner, is to reopen debate on the nature of higher education and the relationship between higher education and vocational training, between treating legal education as humanitarian studies and as professional training, between acquiring the capacity to think critically and independently and acquiring practical knowledge and skills; and, ultimately, the determination of the core functions of legal education. In this broad context, the accommodation of teaching technologies in the already overcrowded law curriculum is much more than a technical issue.

To consider any changes to law curriculum to accommodate technology in teaching we need to recognise that, in the last three decades or so, higher education in Australia has undergone some unprecedented changes, restructuring and transformation.³⁷ These changes are frequently described as “intense turmoil”, “unsettling”, and as causing “crisis” in identity. With them are, of course, tensions, conflicts and uncertainties (Fitzgerald 2012).

Not very long ago we described a university (and hence academic work and academic identity), as an institution that is “autonomous, self-governing with particular privilege and

public duties”, and governed in a collegial manner (Fitzgerald 2012, p. 2) We hold dear such values as intellectual freedom, autonomy, collegial authority and leadership (Fitzgerald 2012, p. 7). It was claimed that “[i]f the disciplined pursuit of truth was the university’s purpose, untrammelled freedom of thought was its condition and lifelong tenure its guarantee.” (Manne 2012, p.2) But we now know and have accepted that such a perception is largely romantic and idealised, even though, to a certain extent, it was practised and pursued at different times in history. The reality is that, since the mid-1960s, the non-vocational disciplines are no longer at the heart of the university, and humanities have become increasingly a less important part of the life of the academics, not by choice but by necessity (Manne 2012, p. 3).

Not surprisingly, legal education in Australia in the last 30 years or so has undergone some very significant changes, most vividly described by the eponymous author of the Pearce Report, Emeritus Professor Dennis Pearce, that “[t]he past may have been a different country — but so is the future.” (Pearce 2018, p. 56) It is a story of transformation and one that has no end (Coper 2018, p. 4). Without going into detailed discussion of this transformation, suffice it to say that such changes have caused a “longstanding, if not timeless, tension between legal education as professional and vocational, on the one hand, and, on the other, as liberal and humanitarian.” (Coper 2018, p. 4). More specifically these are “tensions between theory and practice, between general education and professional education, and between knowledge and skill.” (Coper 2010)

The transformation of legal education, fundamental as it might be, has not changed the basic belief widely (though not universally) held by the legal profession in the continuing importance of acquisition of traditional knowledge, signified by the compulsory nature of the Priestley 11 subjects.³⁸ Such an insistence on the knowledge-based prescription does not, however, prevent a quiet change in curriculum that “seeks to balance the acquisition of knowledge, skills, and values ... to develop the skills of research, analysis, independent and critical thought, problem-solving, communication, advocacy, negotiation, and so on.” (Coper 2018). At the same time, there is an ever increasing demand for expansion of the knowledge

³⁷ In fact, it is also true in the United Kingdom, Canada, New Zealand and other English-speaking jurisdictions.

³⁸ The Priestley 11, though officially introduced in 1992, can be traced back to the 1982 McGarvie Report: Council of Legal Education Academic Course Appraisal Committee, “Legal Knowledge Required for Admission to Practice” (Report, Council of Legal Education 1982). See Rice (2018, p. 222)..

base. Indeed, for quite some time the law curriculum has been grappling with issues such as globalisation (hence international and comparative perspective), sustainability, indigenous perspective, wellness and resilience, and gender (Galloway 2017, p. 1-2). Adding to the list are the arguments for inclusion of statutory interpretation, legal history, jurisprudence, experiential learning, clinical legal education, and so on.³⁹ This inevitably leads to competition for time and priority in the already crowded curriculum.

The reform of the curriculum, if any, is also complicated by the fact that law students come to study law for all kinds of different reasons with different career expectations, and almost half of them have no intention to practise law upon graduation.⁴⁰ The teaching of practical skills, although not precisely defined,⁴¹ clearly needs to be balanced against the need for a generalist education, if so many students are to end up in careers other than legal practice.

The bottom line is: do we educate students towards becoming critical and independent thinkers or towards becoming skillful practitioners? Can we achieve both?⁴² In light of the long list of skills demanded by the legal profession, are we able to teach them all? Or can we reduce these practical skills to the minimum essential skills such as analytic thinking, ethical reasoning and policy-based analysis, as suggested by Professor Rosalind Dixon? (quoted in Saw 2018). In the age of “information overload”, it is important that we keep in mind that our fundamental role is to shape how we understand and appreciate law (Edelman 2012).

If the impact of technology on law and legal practice is pervasive and disruptive, and the disruptive technologies might soon “obviate ... many, if not most, of the traditional legal skills and characteristics of traditional lawyers”

(Fenwich, Kaal and Vermeulen 2017, p. 354), then we need to differentiate legal skills demanded by the legal profession and identify new ones that our future graduates will need as additional skills (Perlman 2017). However, these additional skills will also need to be transferable and “non-automatable” (Department of Education and Training 2018, p. 4). While machines are good at replicating knowledge and replicating abilities, we need to shift our learning focus to skills harder to be automated, such as unique human characteristics of empathy, leadership and integrity (AlphaBeta 2019).

According to the Foundation for Young Australians, by 2030 workers will spend almost 100 per cent more time at work solving problems, 41 per cent more time on critical thinking and judgement, 77 per cent more time using science and mathematical skills, and 17 per cent more time using verbal communication and interpersonal skills (Foundation for Young Australians 2017, p. 4). For future lawyers, they need to understand people, processes, experience, and security behind the technology to ensure that technological solutions actually provide values (Lat 2017), not bias or discrimination.

One can always argue that future lawyers should be able to critically evaluate technology, its application and its limitations as well as implications, and critical evaluation is, of course, the traditional skill that a law school must offer. In short, it is not about teaching students to be technological experts, but teaching them to understand the principles underlying the technologies within a framework of a broad education in social science, while also equipping students with various practical skills, including technological competency.⁴³ Indeed, it is strongly argued that, despite the advancement of technologies and the need to respond to changes brought about by them, traditional skills such as critical and analytical thinking and problem solving, and values of legal practice

³⁹ See discussions in Lindgren, Kunc and Coper (2018, chpt. 5).

⁴⁰ See International Legal Education and Training Committee (2004, p. 9).

⁴¹ While not strictly defined, the now defunct International Legal Services Advisory Council once listed the following practical skills for law curricula: problem solving; legal analysis and reasoning; legal research; factual investigation; communication; counselling; negotiation; litigation and alternative dispute resolution, mediation and arbitration; management of legal work; recognising and resolving ethical dilemmas; drafting skills; promoting of justice and fairness; and professional development. See International Legal Education and Training Committee (2004, p. 8). Another good reference to skills is the 1992 MacCrate Report in the United States which outlined systematically the various fundamental skills, such as legal research and analysis, problem solving, communication, and court and alternative dispute resolution methods and procedures, as well as ethics: see Canick (2014), citing American Bar Association Section of Legal Education and Admissions to the Bar, “Legal Education and Professional Development — An Educational Continuum” (Report of the Task Force on Law Schools and the Profession, American Bar Association, July 1992).

⁴² The emphasis on teaching practical skills is not without controversy. It has been argued that: “the core role of a law school is not to teach students to learn or memorise hundreds of cases. Nor is it to teach our brightest students how carefully to distinguish any factual scenario before them from a decided case. Instead, the most important role should be for students to read far fewer cases and instead to focus much more upon history, context and theory.” (Edelman, 2012)

⁴³ This clearly was the principal theme that emerged from the 2017 conference on legal education in Australia: see Lindgren, Kunc and Coper (2018), a collection of papers presented at the Future of Australian Legal Education Conference in August 2017.

such as ethical propriety and social responsibility, must all be instilled in future lawyers. At the same time, there are new skills, such as emotional intelligence, digital literacy, teamwork and collaboration, that are demanded by the evolving legal practice (Legg 2018; Appleby, Brennan and Lynch 2018). Here once again lies the coexistence of constancy and change, and contemporary skills learnt for changes are also to reinforce the learning of the constancy.

As already mentioned, predicting the future and the kinds of skills essential for the future is a risky business, but the needs identified above can be of assistance in guiding our design — or, more precisely, adjustment — of the law curriculum to meet future needs. Further, it is generally agreed that the new skills, generally referred to as technical literacy, required for technology-driven society is not to undermine the acquisition of traditional knowledge and skills for legal practice (Law Society of New South Wales Commission of Inquiry 2017, FLIP Report, p. 77). In other words, despite some severe criticisms of the Priestley 11,⁴⁴ we are unlikely to move away from this compulsory requirement, at least not in the near future. It is also worth pointing out that the demand for new skills will be on top of what have already been recognised as new skills for a globalised world, such as competency in international and comparative law.⁴⁵

Nevertheless, we need to ensure that our future legal practitioners will not only be capable of adapting to changing technologies and innovation, but will also fully understand the legal and ethical issues involved in the use of modern technologies. To understand these issues will necessarily demand a basic understanding of the operational principles of the various technologies, so as to avoid the increasingly common situation in which legal practitioners are asked to deal with issues that they do not fully understand due to rapid technological development (Fenwich, Kaal and Vermeulen 2017, p. 379), or entrenching the mismatch between skills taught and skills needed in practice (Deloitte 2018). The teaching of digital literacy should be part of the teaching

of general legal skills (Horton 2017), and any training in the use of legal technology will need to result in skills that AI will not be able to automate, such as the very “human” capabilities for creativity, empathy, compassion, and emotional intelligence (Krook 2018). The then President of the Law Council of Australia, Fiona McLeod SC pointed out:

*We need a basic understanding of the operations and language of predictive coding, computational analysis and “learning” and to understand the rules, assumptions and heuristics or bias in programming.*⁴⁶

However, it would be wrong to assume that we have a consensus that law schools should teach these technologies. Some are very critical, believing our law schools might have failed to innovate and our existing teaching methods — teaching students to apply the law to a set of facts, precisely the skill that is currently being automated — excludes student discussion on morality, emotion and empathy, the “human” skills that are now required (Krook 2018). Thus, one view argues for the complete redesign of law curriculum to “future proof” the future graduates (Turner 2016) and another view questions whether law schools are the right place to teach such technical skills (Saw 2018, Grady 2018)⁴⁷. Still others remind us that the technologies taught at the law schools might not be the ones that will be used by the law firms by the time the students graduate (Curphey 2018). There are also arguments that a law degree is an academic degree and, as such, students might be better advised to undertake technology courses at their practical legal training (PLT) stage (Hall 2017).

As already discussed above, the present focus of many universities is on adopting technologies to facilitate transformation of the delivery of teaching and learning content. While these practices will familiarise students with some new technologies, they are far from equipping students with technological competency. There is a misconception that today’s students are already technologically savvy, when in fact

⁴⁴ It is characterised as overly content-based and “pedantic”, and as such, has attracted continuing debate as to whether it stifles innovation. See Coper (2018, p. 6–7). It is reported that the former Chief Justice of Australia Robert French once described the Priestley 11 as a “dead hand” on curriculum reform and needing urgent revision: see Krook (2018).

⁴⁵ See the International Legal Services Advisory Council (2004). See also discussions in Coper (2012).

⁴⁶ McLeod (2018, p. 506). Others have, however, identified the capacity to work in multidisciplinary teams and with software engineers, basic coding for lawyers, basic mathematical principles for coded technological solutions in law, and the development of basic conceptual coding skills as necessary for future law graduates, see Fenwich, Kaal and Vermeulen (2017, p. 379–82).

⁴⁷ Grady (2018) states that lawyers need not to know “the intricacies of how the program worked”.

their understanding of technology is shallow, and they lack, in particular, skills to evaluate sources of information and underlying principles in technologies (Canick 2014, p. 665).

One needs to recognise too that, for legal educators, teaching technological competencies is a tall order, as few of our current legal academics are well acquainted themselves with technologies, and we are probably not required to understand these matters in the first place. Not surprisingly, technological proficiency is not considered a key outcome in legal education, and where technologies have been accepted, mostly warily, they are expected to serve the purpose of achieving traditional educational objectives (Canick 2014, 664). However, times have changed and we need to act now or otherwise we will be forced to do so soon. The Australian Government has announced a review of the Australian Qualifications Framework (“AQF”) to ensure that the AQF meets “the expectations of students, the education sector and the domestic and international employment markets”, including addressing the changing nature of work and providing the high-level skills and knowledge required for the future workplace (Department of Education and Training 2018, p. 18).

In the absence of any consensus, individual law schools in Australia and in other countries have now begun to introduce some new electives, such as law apps, cyber law, computer coding for lawyers, cloud computing, and law-based hackathons, among others, and the various subjects are offered at both undergraduate and postgraduate levels as well as training modules⁴⁸. Most of the subjects are introduced in an ad hoc manner, and only a handful of law schools are making major reforms to their curriculum to prepare the future lawyers (Cohen 2018, Nussbaum, K 2018). The internet search results of Australia law schools teaching technology-based subjects seem to suggest that few law schools have considered the introduction of such subjects in light of the nature of higher education, the student cohort, overcrowding of the curriculum, and justification for the choice of a particular subject. In light of the fragmented and ad hoc practice among Australian law schools we might ask: if technical competency is a question of competency in discharging lawyer’s duties, should such

a subject be made a compulsory or core subject in the law curriculum? (Law Society of New South Wales Commission of Inquiry 2017, FLIP Report, p. 78)

In the context of Australian legal education, a most comprehensive argument for teaching law technology in Australia is mounted by Kate Galloway, a prolific writer on legal technology from Bond University. Galloway argues for a whole of curriculum approach (or what she calls an “immersion approach”) to digital literacy, and urges legal educators to consider digital technologies in the broader context of the law (Galloway 2017, p. 2). Her argument is essentially technology-driven, arguing for digital technologies to be embedded within teaching and learning — that is, for them to be integrated into all law subjects (Galloway 2017, p. 15). This seems to be a rather idealistic approach, echoing an earlier argument for an integration-based approach to globalisation of law and legal education (Office of Learning and Teaching 2012, pp. 79-82). While it is true that there should be no limit to the broader contexts of the law (Galloway 2017, p. 3), it is nevertheless doubtful whether such an approach is also practical. As discussed above, there has been an increasing demand for inclusion of the various subject matters in the law curriculum and, although each has been argued for embedment in the law curriculum, none can, to this day, claim to have been so integrated. In this context, legal technology is just one of the latest demands for inclusion, albeit the one having the most radical impact on law and legal practice. Further, such an approach assumes that the legal academics are not only willing, but also digitally literate, or could easily become digitally literate.

While we strongly believe that there is a need to teach law students about some technical issues, we also recognise the need to have such teaching accommodated within the existing Priestley 11-dominated curriculum. More importantly, perhaps, despite the technological changes, there are certain constant values in higher education, such as critical and independent thinking, interpersonal communication and negotiation skills, and adherence to ethical practice. These fundamental values need to be coupled to an understanding of technological

⁴⁸ Internet search by the author suggests that no fewer than twelve Australian law schools are currently offering law technology subjects in various forms. For further descriptions of and discussions on legal technology teaching in Australian law schools, see FLIP Report (2017, p. 78), Lambert (2016), Taylor (undated). For discussions on law technology teaching in selected law schools in Australia, see Lindgren, Kunc and Coper (2018, chpt VI). For a discussion of law technology courses in the United States see: Canick (2014, p. 680–1), Perlman (2017). For a summary of law technology courses offered in the United States, Canada, Australia and Europe, see Singleton-Clift (2017). For a discussion on international recognition of the importance in teaching law technology, see Thanaraj (2017).

development and the underlying principles of technology; skills learnt from the latter will then reinforce the learning, and assist in the application of the fundamental values. With this rationale, we believe that the “conventional” Priestley 11-led curriculum should refocus on fundamental values in legal education through the teaching of the curriculum in a broad social science context (Nussbaum, M 2018). With this reorientation to teaching the constancies, we should then introduce two technology subjects that deal with changes. We would imagine a “law and technology” subject to introduce law students to an understanding of the ever-evolving new technologies, and another subject on “coding for lawyers” to explain to students the underlying principles of coding and algorithms. These two subjects would not produce specialists in technology, but graduates who would be confident in technology as well as fully aware of the limitations and potential biases in the products of technologies such as big data and AI. We do not think there would be any particular harm if this was made compulsory in the law curriculum.

4. CONCLUDING REMARKS

We should recognise that changes brought about by the development of science and technology are a fixed feature of legal development in all legal systems.⁴⁹ In this sense, the topic of law and technology is in fact not new, nor should it be as frightening as it seems to be.

We should, however, also recognise that the current round of technological impact on law and legal education is massive and developing extremely rapidly. We have never faced any more severe challenges until now, and what we are witnessing at the moment is only the beginning of it. Indeed, modern technologies, especially AI and big data, have presented us the biggest challenges. In this sense, the future could look daunting, but it could also be promising.

In responding to such changes, we must not lose sight of the fundamental mission of higher education; that is, “higher education is about cultivating knowledge and analytical skills that can be of enormous value well beyond the workplace—and encouraging wide-ranging intellectual enquiry” (Universities Australia 2018, p. 12). Learning to effectively use technology is to ensure that future graduates will be technologically

confident and proficient, but a law graduate is not, nor needs to be, an expert in technology. We should also recognise that nothing can be future-proof, as we do not know exactly how technology will develop and what kind of impact any new developments might make. However, there are values and skills that are more enduring and more capable of adaptation than others, and such values and skills are the ones that machines lack until now, such as critical analysis.

Law, after all, is a human science that demands a “human touch”, and that calls for human values and empathy, in addition to rationale and reason, and none of which can be replaced by machines. As such, it is premature to pronounce the death of legal practice or legal education. In fact, common law has always been an evolving system that adapts to changing times. The common law system has proven, time and again, that it is capable of preserving the “skeleton of principles” while adapting to contemporary issues and demands.

The same can be said about legal education, which is a reflective, flexible and constantly changing system. Like the way legal education adapted to globalisation, legal education will meet new technological challenges and, as such, there is no reason to believe that there is not a bright future for legal education and the legal profession, even though our future could indeed be thrills and spills, and it is reasonable to believe that we will continue to make use of technologies as we have done so for decades, not that technology will make use of us.

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⁴⁹ As early as the 1960s, legal educators were asking how law and legal education might respond to the exponential growth in scientific knowledge during the modern era: see, eg, Miller (1967, p. 29-39).

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