

## Future of Professions

### Introduction

This article considers what the professions might look like in the future. Its primary focus is on how new technology might change the nature of professional practice. The title then considers the trend towards ever-increasingly large and powerful, global and national professional firms and how they are changing the professional landscape. Finally, it discusses the trend towards government placing obligations on not just individual professionals but also the firms. The title has the following sections:

- New Technology;
- Increasingly Large and Powerful Firms;
- Regulating Professional Firms in Addition to Individual Professionals; and
- Summary.

### New Technology

One of the most significant changes facing the professions is the rise in the use of new technology. It is transforming professional practice through access to online knowledge, low-level task automation, online forums and artificial intelligence. With society increasingly embracing new forms of technology, it seems inevitable that this trend will only grow in the future. The section discusses the following issues:

- Online Information
- Professional Education
- Low-Level Automation
- Communities of Experience
- Artificial Intelligence
- Ultimate Ethical Decision Making.

### Online Information

Knowledge is a cornerstone of the professions and the internet has made knowledge universally available. Practitioners now have immediate access to their entire professional knowledge domain including latest developments. Lawyers, for example, now have all legislation and cases publicly available from government websites or from the Australasian Legal Information Institute, a free, university-based website.<sup>1</sup> Finding the relevant law now takes minutes from a lawyer's desk, rather than hours of searching in the library. This knowledge is now also freely available to the public. Medical information is available via government and private websites on every topic imaginable that the public can access. As Richard and Daniel Susskind describe the change: 'Traditionally, practical expertise has been held in people's heads, textbooks, and filing cabinets. Increasingly, this expertise is being stored and represented, in digital form ... As a result, it is

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<sup>1</sup> Australasian Legal Information Institute, *Australasian Legal Information Institute: A Joint Facility of UTS and UNSW Faculties of Law* <<http://www.austlii.edu.au/>> (accessed 16 November 2017). See also Graham Greenleaf, 'Review Essay: Technology and the Professions: Utopian and Dystopian Futures' (2017) 40 *University of New South Wales Law Journal* 302, 304.

being handled, shared, used, and reused in very different ways'.<sup>2</sup> With ever more accurate search engines, this information is continuing to become increasingly useful. Email and increasingly sophisticated videoconferencing allows greater communication, connecting interstate and international firms seamlessly.

## Professional Education

The internet is also assisting online professional education. Open Universities Australia, for example, now offers professional degrees online, such as law and accounting.<sup>3</sup> The Susskinds note that: 'More people signed up for Harvard's online courses in a single year ... than have attended the actual university in its 377 years of existence'.<sup>4</sup> Richard Susskind sees the need to rethink professional education at a more basic level to consider a more flexible, future technological environment. He is doubtful that legal educators, for example, are 'schooling tomorrow's lawyers to be more adaptable, team players, professionals who can transcend traditional legal boundaries, converse naturally in the language of the boardroom, and find it natural to embrace techniques of management and technology'.<sup>5</sup>

## Low-Level Automation

Technology, inevitably, will continue to take over some of the lower-level activities of professionals. New physical technologies are already radically transforming how professions such as medicine, engineering and architecture approach problems. Machines now monitor patients in hospital wards and administer medicine, replacing much of the traditional work of nurses. Doctors routinely rely on machine-based diagnostics, and 3D-printers can now 'print' bespoke limbs and even organ tissues for patients.<sup>6</sup> New lighter and stronger building materials and pre-fabricated sections have altered how structures can be built. Police can now scan a vast fingerprint database in seconds and use DNA evidence in court providing exceptional accuracy. The everyday use of such sophisticated technology in the professions is only going to grow, making practice easier and potentially allowing better service to clients. In the advice professions, computers now often replace professionals for low level tasks. The Australian Tax Office now provides an online tax return system for basic financial returns done easily and in real time, and without the need for an accountant.<sup>7</sup> Every year the system becomes more sophisticated. A recent report into the future of the NSW legal profession found that that profession is similarly embracing technology for low-level tasks:

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<sup>2</sup> Richard Susskind and Daniel Susskind, *The Future of the Professions: How Technology Will Transform the Work of Human Experts* (Oxford University Press, 2015) 109.

<sup>3</sup> Open Universities Australia, *Law and Justice* <<https://www.open.edu.au/courses/law/pgrd>> (accessed 16 November 2017); Open Universities Australia, *Business* <<https://www.open.edu.au/courses/business/ugrd>> (accessed 16 November 2017).

<sup>4</sup> Susskind and Susskind, above n 2, 1.

<sup>5</sup> Richard Susskind, 'Tomorrow's Lawyers' (2014) 81 *Defence Counsel Journal* 327, 331.

<sup>6</sup> Peter Mellgard, 'Medical 3-D Printing Will "Enable a New Kind of Future"', *Huffington Post* (online), undated <[https://www.huffingtonpost.com/peter-mellgard/medical-3d-printing-future\\_b\\_7088994.html](https://www.huffingtonpost.com/peter-mellgard/medical-3d-printing-future_b_7088994.html)> (accessed 16 November 2017).

<sup>7</sup> Australian Taxation Office, *Lodge Online* <<https://www.ato.gov.au/Individuals/Lodging-your-tax-return/Lodge-online/>> (accessed 16 November 2017).

Legal process outsourcing, or LPO, is typically routine or 'commoditised' process work undertaken by businesses engaged by law firms or general counsel. LPO is a \$1 billion industry in the US ... Real-time transcripts [for example], which are shareable and can be annotated, are speeding up hearings in digital court and commission settings.<sup>8</sup>

John Flood gives the example of the 'Do Not Pay' online automated appeal service for parking tickets, which can interrogate the 'client' and then write a letter to the appropriate authorities.<sup>9</sup> As the NSW Law Society notes, this automated service has already 'helped around 160 000 people successfully appeal their parking tickets'.<sup>10</sup> Flood predicts that eventually: 'Online courts with or without judges will take over more minor disputes, which will reduce the need for lawyers'.<sup>11</sup> Graham Greenleaf sees this increasing use of low-level automation leading to a category of 'para-professionals' who, in the legal field, for example, 'have the training, the formal status, and the self-image of a lawyer, but are really closer to a low-paid paralegal doing repetitive work ... This will usually involve driving and interpreting computerised products developed by those with more expertise'.<sup>12</sup>

### Communities of Experience

Another development that is likely to grow in the future is 'communities of experience'.<sup>13</sup> These are groups of people connected online who are not necessarily experts but who share their experiences, the totality of which can amount to a valuable resource. For example, an online global group may be devoted to discussing surviving cancer and sharing experiences, information received from doctors and the latest medical developments internationally. As Greenleaf and the Susskinds, describe it:

This model involves 'the contributions of past recipients of professional service ... who have managed to sort out problems for themselves'. This aspect involves the representation of experience (but not professional expertise) ... 'in the spirit, for example, of systems like Wikipedia'.<sup>14</sup>

### Artificial Intelligence

The above discussion focuses largely on the benefits of lower-level advances in technology. However, a 'holy grail' for technology advancement is artificial intelligence ('AI') which could have a transformative impact on professional practice. This concept can span a spectrum from 'soft' AI, which is relatively low-level self-learning, through to 'hard' AI, where computers can mimic human thought and activity, and display significant self-learning and self-appraisal. An example of soft AI is internet advertising that learns the browser's viewing patterns to predict products the individual might want. In contrast, IBM's 'Watson', is an

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<sup>8</sup> Law Society of New South Wales, *FLIP: The Future of Law and Innovation in the Profession* (2017) 20, citing Steven Walker (testimony, *FLIP*, 20 June 2016) 31.

<sup>9</sup> John Flood, 'Foreword: Professions as Contingent Structures in a Perilous World' (2017) 40 *University of New South Wales Law Journal* 211, 217.

<sup>10</sup> See Law Society of New South Wales, above n 8, 41.

<sup>11</sup> Flood, above n 9, 217.

<sup>12</sup> Greenleaf, above n 1, 318-9.

<sup>13</sup> See Susskind and Susskind, above n 2, 223.

<sup>14</sup> Greenleaf, above n 1, 316, citing Susskind and Susskind, above n 2, 223.

example of hard AI and mimics highly sophisticated human-like thought.<sup>15</sup> Flood believes that, while such hard AI will have a major impact, it will not displace professionals entirely:

more and more of the work done by professionals is succumbing to machines ... Perhaps the biggest transformations will come from the increased use of artificial intelligence and big data, as exemplified by ... processing on IBM Watson. The aim ... is not to displace lawyers but to augment and improve their capacities.<sup>16</sup>

As AI develops, it will inevitably have an increasing impact on many aspects of professional practice.

### **Ultimate Ethical Decision Making**

AI and other new technologies can raise serious ethical issues for professionals. Ethical questions are particularly acute in the medical profession where life and death is involved. For example, invitro-fertilisation technology and stem cell research involves the routine destruction of potential early-stage life and medical practitioners in these areas must face these moral issues daily.<sup>17</sup> In the military, unmanned aerial bombing drones are now common with no human pilot on board. Here, though, there is still a soldier controlling the drone, making the complex moral decision whether to fire the missile and subject to various levels of higher authorisation. With ever-developing sophistication, however, the moral issues become more complex. How much delegation should be given to technology and to what extent should ethical decisions remain with a human? Susskind and Susskind question 'the extent to which computerized and robotic weapons should be autonomous' and note that 'autonomous weapons can have built-in checks that embody and reflect some principled, ethical views that have been settled in advance and embodied in the systems'.<sup>18</sup> Flood ponders the difficult ethical road that lies ahead:

As AI improves – through self-learning, moves towards autonomy, and self-replication – how will we ensure the machines are ethical? Are we content to update them occasionally via software with the latest human ethical codes, or should we be thinking about a distinctive code of ethics for machines, and, if so, what would it look like?<sup>19</sup>

### **Increasingly Large and Powerful Firms**

Another clear trend that seems likely to continue is the increasing size and power of professional firms. Local and State-based firms are becoming national and national firms are becoming international. With this increase in size comes increased power, not only economically but also politically and sociologically.

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<sup>15</sup> See Law Society of New South Wales, above n 8, 40-1.

<sup>16</sup> Flood, above n 9, 216.

<sup>17</sup> See generally Susskind and Susskind, above n 2, 283.

<sup>18</sup> Susskind and Susskind, above n 2, 282.

<sup>19</sup> Flood, above n 9, 217.

## Increasing Size

It seems inevitable that professional firms will continue to grow. Economies of scale allow for better potential returns. National and international clients increasingly need servicing in multiple jurisdictions due to globalisation and professional firms need to match their clients' growth and needs. Australian legal landscape, for example, has grown dramatically over the past decade or so becoming truly integrated in the global economy. The largest firms all now have developed a significant global presence. As Justine Rogers et al note:

Many have significantly increased their size by merging or forming alliances with much larger UK or China-based law firms in the early 2010s ... For example, King & Wood Mallesons ... now has over 2000 lawyers across 27 international offices, with global annual revenue more than US\$1 billion, it is now one of the top 25 law firms globally.<sup>20</sup>

This increase in size also places pressure on governments. They may need to develop national, rather than State-based regulation and participate in international regulatory bodies. For example, there has been an ongoing movement to create a single national regime for lawyers in Australia, where traditionally, their regulation has been State-based.<sup>21</sup> At the international level, it also seems inevitable that international regulatory measures will continue to grow. In the finance sector, for example, the International Organisation of Securities Commissions is an intergovernmental body that sets principles and standards for national securities regulators.<sup>22</sup> This ensures that the Australian regulatory regime<sup>23</sup> for financial planners, an emerging profession, is based on coordinated international principles.

## Increasing Power

The increased size, geographical reach and wealth of large professional firms inevitably brings with it increased power. This can take the form of economic power but also social, professional and political power. Socially, professional firms create norms of behaviour within the firm that are very real in determining behaviour. The term 'corporate culture' encapsulates this idea well. Each firm will develop its own practices, ethos and moral microcosm.<sup>24</sup> If employees or indeed partners or directors don't follow these norms they are unlikely to survive for long. The larger the firm, the larger and more pervasive these social norms can be. As Breakey and Sampford note, larger firms are now setting their own standards and norms to the point where these are sometimes at odds with those of the profession.<sup>25</sup>

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<sup>20</sup> Justine Rogers, Dimity Kingsford Smith and John Chellew, 'The Large Professional Service Firm: A New Force in the Regulatory Bargain' (2017) 40 *University of New South Wales Law Journal* 218, 241-2, citing King & Wood Mallesons, *About Us* <<http://www.kwm.com/en/au/about-us>> and King & Wood Mallesons <[http://www.kwm.com/~media/SjBerwin/Images/Go%20Deeper/king%20and%20wood%20mallesons%20infographic\\_eng.ashx?la=en](http://www.kwm.com/~media/SjBerwin/Images/Go%20Deeper/king%20and%20wood%20mallesons%20infographic_eng.ashx?la=en)> (both accessed 16 November 2017).

<sup>21</sup> See, e.g., *Legal Profession Uniform Law 2014* (NSW); Rogers, Kingsford Smith and Chellew, above n 20.

<sup>22</sup> International Organisation of Securities Commissions, *About Us* <[https://www.iosco.org/about/?subsection=about\\_iosco](https://www.iosco.org/about/?subsection=about_iosco)> (accessed 16 November 2017).

<sup>23</sup> *Corporations Act 2001* (Cth).

<sup>24</sup> See Hugh Breakey and Charles Sampford, 'Employed Professionals' Ethical Responsibilities in Public Service and Private Enterprise: Dilemma, Priority and Synthesis' (2017) 40 *University of New South Wales Law Journal* 262.

<sup>25</sup> Breakey and Sampford, 'Employed Professionals' Ethical Responsibilities in Public Service and Private Enterprise: Dilemma, Priority and Synthesis' (2017) 40 *University of New South Wales Law Journal* 262.

Such power can also translate into professional and political influence. Traditionally, it is the professional association that is the keeper of professional norms and has operated jointly with the government in what is referred to as a 'regulative bargain' between the two.<sup>26</sup> However, with the rise in firm size and power, that duopoly is starting to break down, with large firms exerting themselves. For example, in the Australian legal profession, the largest firms have formed a lobby group that has been able to leverage its political power to become a new, third political player and exert major influence on professional association and government policy making.<sup>27</sup> This issue is discussed further in the Regulatory Trends title.

### **Regulating Professional Firms in Addition to Individual Professionals**

Historically, professionals have tended to be sole practitioners or in small practices of only a few practitioners. Government regulation focused on ensuring that the individual professional complied with the legislation. However, with the continuing trend towards larger firms and as noted above, individual practitioners are increasingly subject to the internal dynamics and pressures of the firm, acting at the firm's behest and for the firms' profit. The result is that regulators are finding it increasingly necessary to regulate not just the individual professionals but also the firm. This can take two forms. One is to make the firm itself directly or 'vicariously' liable for the acts of individual practitioners within the firm. The second is to make the partners or directors responsible for the acts of the individual employee practitioners. This means that the regulator can prosecute the firm or its individual partners/directors for misconduct, with the potential for partner/director practitioners to lose their practicing certificate or licence due to not supervising employees properly. An example of this trend is the case of NSW lawyers. Prior to 2002, the legislative regime only regulated individual practitioners.<sup>28</sup> However, since then there has been a steady widening of requirements making the firm and its partners or directors vicariously liable for actions of employee lawyers.<sup>29</sup> With the continuing growth in professional firm size and proliferation, it seems inevitable that this regulatory trend will continue to increase and that it will be a major feature of professional regulation in the future. (The Regulatory Trends title provides additional discussion on this topic.)

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<sup>26</sup> See Rogers, Kingsford Smith and Chellew, above n 20.

<sup>27</sup> See Rogers, Kingsford Smith and Chellew, above n 20.

<sup>28</sup> *Legal Profession Act 1989* (NSW) prior to a 2002 amendment. See also Rogers, Kingsford Smith and Chellew, above n 20.

<sup>29</sup> See *Legal Profession Act 2004* (NSW); *Legal Profession Uniform Law 2014* (NSW). See also Rogers, Kingsford Smith and Chellew, above n 20.

## Summary

This title has looked at a few issues likely to have significant impact on the future direction for the professions. Technology has already had a major impact in all professions and it seems inevitable that this will continue at an ever-increasingly rate. Another trend is the growth in the size and power of national and multinational professional firms, with the associated increase in power and influence. Finally, regulators are developing new ways to respond to this growth in firm size through regulatory innovation and international regulatory coordination. It seems inevitable that each of these trends will only continue to grow with significant impact on how the professions are practiced in the future.

Written by: John Chellew

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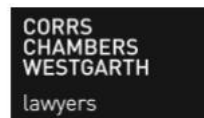


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