

# A Brave New World: Artificial Intelligence and the Future Lawyer<sup>1</sup>

## I. Introduction

1. The capabilities of AI have reached a point where a computer can analyse sizeable amounts of data with great precision and speed, and can thereafter, mimicking how to brain works, be programmed by coders to “learn” various things such as photography,<sup>2</sup> to play video games,<sup>3</sup> or even made to learn how to teach itself.<sup>4</sup>
2. Notably, there was the recent victory of Google’s AI system AlphaGo over Lee Sedol, 18-time world champion of Go. Go is widely known as the most complex game around, with  $1 \times 10^{170}$  possible moves – more than there are atoms in the universe.<sup>5</sup> AlphaGo’s stunning and decisive victory, defeating Lee by 4 games to 1, once again demonstrated the astounding capabilities and potential of AI. AlphaGo synthesised and taught itself 30 million possible moves, and was programmed to mimic human neuron learning networks, which later learnt from its own mistakes by programmers having multiple “clones” of AlphaGo play against itself. Understandably, the victory was hailed as a major breakthrough in AI research.<sup>6</sup>
3. Drawing a parallel with the law, lawyers are also required to trawl through vast amounts of information to order chaos into something usable for clients, and this market is seen as ripe for disruption by AI.<sup>7</sup> This leads inevitably to the question of whether AI will

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<sup>1</sup> Edward Chng, 2<sup>nd</sup> Year J.D. Student, Singapore Management University’s School of Law.

<sup>2</sup> Fang Hui and Zhang Meng, “Creatism: A Deep-Learning Photographer Capable of Creating Professional Work” (11 July 2017) *Cornell University Library Research Archive* <<https://arxiv.org/pdf/1707.03491.pdf>> (accessed 29 August 2017).

<sup>3</sup> Mike Wehner, “Researchers force AI to teach itself how to beat ‘Super Mario Bros’” *BGR* (26 May 2017) <<http://bgr.com/2017/05/26/ai-training-super-mario-bros/>> (accessed 29 August 2017).

<sup>4</sup> Quoc Le and Barret Zoph, “Using Machine Learning to Explore Neural Network Architecture” *Google Research Blog* (May 17 2017) <<https://research.googleblog.com/2017/05/using-machine-learning-to-explore.html>> (accessed 29 August 2017).

<sup>5</sup> Richard Susskind, *Tomorrow’s Lawyers: An Introduction to Your Future* (Oxford University Press, 2<sup>nd</sup> Edition, 2016) at p 14; Demis Hassabis, “AlphaGo: Using machine learning to master the ancient game of Go” *Google Blog* (27 January 2016) <<https://www.blog.google/topics/machine-learning/alphago-machine-learning-game-go/>> (accessed 29 August 2017).

<sup>6</sup> Cade Metz, “In Two Moves, AlphaGo and Lee Sedol Redefined the Future” *Wired* (16 March 2016) <<https://www.wired.com/2016/03/two-moves-alphago-lee-sedol-redefined-future/>> (accessed 29 August 2017).

<sup>7</sup> Jane Croft, “Artificial Intelligence disrupting the Business of Law” *Financial Times* (6 October 2016) <<https://www.ft.com/content/5d96dd72-83eb-11e6-8897-2359a58ac7a5>> (accessed 29 August 2017).

sound the death knell for scores of future lawyers, particularly the junior ones. While there are few indications that the adoption of AI will alter the employment of legal professionals, the embracing of such technology is crucial to complement the work of lawyers and make work processes more efficient. This applies not only to the general practice of law around the world but to Singapore as well.

## II. Current trends surrounding AI in legal practice

4. As of now, many law firms are either reluctant to invest big money in technology, or subjectively think that they have already embraced technology sufficiently.<sup>8</sup> However, big players in the international market clearly see AI as the next frontier. DLA Piper, ranked number one globally in terms of M&A deal volume,<sup>9</sup> recently commissioned AI to be used in due diligence processes where the technology allows analysis of contractual provisions to be automated and completed in “just a few minutes”.<sup>10</sup> Leading global law firm Clifford Chance also sees AI as being a valuable tool to complement rather than replace lawyers, citing the adaptation as being necessary to “deliver what clients value most – ...speed, accuracy [and] risk management.”<sup>11</sup> Clifford Chance stresses that “it is the additional investment from [their] leading lawyers that will ensure this is a tool that is highly valuable”.<sup>12</sup> This suggests that rather than replacing lawyers, AI is meant to supplement the work of legal professionals, and indeed requires the input of lawyers who shape the parameters of software, refine results and even program particular strings of code to tailor to the individual clients’ needs. Indeed, Richard Susskind, IT Adviser to the Lord Chief Justice in England,

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<sup>8</sup> Sarah Plaka, “Why Law Firms Are Still Reluctant to Adopt Technology” *LexisNexis Blog: Future of Law* (7 June 2016) <<http://blogs.lexisnexis.co.uk/futureoflaw/2016/06/why-law-firms-are-still-reluctant-to-adopt-technology/>> (accessed 29 August 2017).

<sup>9</sup> DLA Piper website – About Us: By the Numbers <<https://www.dlapiper.com/en/australia/aboutus/>> (accessed 29 August 2017).

<sup>10</sup> DLA Piper website, “DLA Piper Partners with Kira Systems to Leverage Artificial Intelligence Tool For M&A Due Diligence” <<https://www.dlapiper.com/en/us/news/2016/06/dla-piper-partners-with-kira-systems/>> (accessed 29 August 2017).

<sup>11</sup> Bas Boris Visser, “Clifford Chance Drives Innovation Strategy with Artificial Intelligence System Kira”, *Clifford Chance Press Releases* (5 July 2016) <<https://www.cliffordchance.com/news/news/2016/07/clifford-chance-drives-innovation-strategy-with--artificial-inte.html>> (accessed 29 August 2017).

<sup>12</sup> *Ibid.*

agrees that the lawyer will need to evolve into a “legal technologist”<sup>13</sup> and “engineer of knowledge”.<sup>14</sup>

5. More radically, platforms such as LawGeex – which boasts a service that completely automates contract review services, completely cuts out the lawyer and claims to provide 80% savings in time and 90% savings in costs.<sup>15</sup>
6. Even in litigation, *Pyrrho Investments v MWB Property*<sup>16</sup> signals strong approval in England for the use of “predictive coding”, a process where a program is “taught” to wade through vast amounts of data to select relevant electronic documents for disclosure. The case involved claims of almost £30 million, and involved 17.6 million files to sort through for standard disclosure obligations. BLP, a firm with in-house data processing capabilities representing the defendant, successfully argued for leave to use predictive coding, filling a gap in the UK Civil Procedure Rules that do not contemplate in detail how electronic documents should be searched in the process of disclosure.<sup>17</sup> In the judgment, despite the defendants’ objection to its use, the consistency and cost benefits of AI were also cited as key reasons in approving the use of predictive coding, although with the caveat that a court’s ruling on the suitability of such technology would depend on the “particular circumstances” of each individual cases.

### III. Implications for Singapore

7. In a world where downward pressure on legal fees is exacerbated by, *inter alia*, the growth of companies outsourcing work<sup>18</sup> or non-law firms (like the big accounting firms) trying to do some legal work in-house,<sup>19</sup> the development of an open-source community of legal knowledge, and the increasing prevalence of General Counsels

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<sup>13</sup> Simon Toulson, “Artificial Intelligence and the Law”, *Fenwick Elliott Annual Review* (8 November 2016) <<https://www.fenwickelliott.com/research-insight/annual-review/2016>> (accessed 29 August 2017).

<sup>14</sup> *Ibid.*

<sup>15</sup> LawGeex website <<https://www.lawgeex.com/>> (accessed 29 August 2017).

<sup>16</sup> *Pyrrho Investments and Another v MWB Property and Others* [2016] EWHC 256.

<sup>17</sup> *Id.*, at [10].

<sup>18</sup> William Pfeifer, “What is Legal Outsourcing?”, *The Balance* (9 September 2016) <<https://www.thebalance.com/outsourcing-legal-services-2151240?i10c.>> (accessed 29 August 2017).

<sup>19</sup> The Economist, “Attack of the Bean Counters”, *The Economist* (19 March 2015) <<http://www.economist.com/news/business/21646741-lawyers-beware-accountants-are-coming-after-your-business-attack-bean-counters>> (accessed 29 August 2017).

tasked, amongst other things, to keep legal fees down, local law firms must invest in time-saving technology to increase efficiency and remain competitive.

8. Additionally, if the moves from the biggest global firms are anything to go by, the global firms' confidence in the ability of AI to deliver the best and fastest service at the lowest costs appears set to compel Singaporean firms to similarly invest in AI to stay on the cutting-edge. However, while bigger firms might find the making of such investments easier, the fate of smaller firms remains unclear, chiefly because of the high initial costs of investing in AI. Beyond the recently announced scheme announced by the Singapore government to help firms financially in adopting technology,<sup>20</sup> smaller firms could either wait for the technology to get more affordable eventually, or pool their resources to share ownership in an AI platform – much like how they might share other resources like office space.
9. Additionally, in Singapore, s 44(1) of the Supreme Court e-Practice Directions states that electronic discovery applies only with “mutual agreement of the parties.”<sup>21</sup> Thus whether such approval as espoused in *Pyrrho* finds its way onto Singaporean shores remains to be seen.
10. The future of the practice of law, in Singapore and abroad, is probably not the doomsday scenario painted by some where robots take over the work of lawyers who are in turn rendered unemployed and irrelevant. Nevertheless, the future lawyer might just be one who is equally comfortable working with SQL as he is writing about legal theories on blogs in the style of the SAL.

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<sup>20</sup> Ng Huiwen, “\$2.8m Scheme to Help Smaller Law Firms Adopt Tech”, *The Straits Times Online* (28 Feb 2017), <<http://www.straitstimes.com/singapore/28m-scheme-to-help-smaller-law-firms-adopt-tech>> (accessed 29 August 2017).

<sup>21</sup> *The Supreme Court of Singapore e-Practice Directions* s 44(1).