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KEEPING AN AI ON TECHNOLOGICAL ADVANCES IN BUSINESS LAW

❖ NOTE ❖

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Abstract

This Note explores the role that artificial intelligence plays in the legal world today and the ways in which it may affect the legal profession in the future. Artificial intelligence programs are being used in a variety of ways to streamline legal research, contracts analysis, and many other tedious and time-consuming legal processes. As this technology develops, many lawyers are concerned that these efficient programs will begin to replace lawyers, especially at the lower level of big law firms, while others welcome the benefits that this technology will bring to law firms. This Note touches on competing views concerning the implications of the use of artificial intelligence in the legal field, and how the implementation of these programs will ultimately benefit the profession as a whole.

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I. INTRODUCTION

Artificial intelligence (AI) is a developing area at the forefront of technological advancement. The evolution of artificial intelligence has led to its expansion into many different industries, including the legal field.[1] The idea of artificial intelligence tools geared to help streamline legal practice is relatively recent, but these tools will no doubt become more prevalent within the industry.[2] In an ideal world, these tools would aid legal professionals in a business law setting and would save time and money by completing menial tasks that waste the better part of a lawyer's time but cannot be billed to clients.[3] Legal professionals worry, however, that the rise in use of artificial intelligence tools in legal practice will make lawyers' jobs obsolete, especially in business law.[4] Nonetheless, it is more likely, that artificial intelligence tools will become effective aids for attorneys practicing business law, rather than their replacements.[5] In order to analyze this issue, it is necessary to have a basic understanding of artificial intelligence. Part I of this note will be a general overview of what artificial intelligence is and what forms it can take. Part II will take a closer look at the current applications of artificial intelligence in business law, as well as what may be possible in the future as this technology continues to advance. Finally, Part III will explore the impact of artificial intelligence on the field of business law as a whole and what changes its continued use may bring to the legal profession.

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[1] David Schatsky et al., *Demystifying Artificial Intelligence*, DELOITTE UNIVERSITY PRESS (Nov. 04, 2014), https://dupress.deloitte.com/dup-us-en/focus/cognitive-technologies/what-is-cognitive-technology.html#endnote-5.

[2] Julie Sobowale, *How Artificial Intelligence is Transforming the Legal Profession*, A.B.A. J. (Apr. 01, 2016, 12:10 AM), http://www.abajournal.com/magazine/article/how_artificial_intelligence_is_transforming_the_legal_profession.

[3] Jane Croft, *Artificial Intelligence Disrupting the Business of Law*, FIN. TIMES (Oct. 05, 2016), https://www.ft.com/content/5d96dd72-83eb-11e6-8897-2359a58ac7a5.

[4] Greg Wildisen, *Is Artificial Intelligence the Key to Unlocking Innovation in your Law Firm?*, LEGAL WK. (Dec. 12, 2015), http://www.legalweek.com/sites/legalweek/2015/11/12/is-artificial-intelligence-the-key-to-unlocking-innovation-in-your-law-firm/?slreturn=20170006101501.

[5] Schatsky et al. *supra* note 1.

II. AN INTRODUCTION TO ARTIFICIAL INTELLIGENCE

For many, the term "artificial intelligence" conjures to mind an image of a human-like robot with the capability of rational thought, such as Ava from the movie Ex Machina.[6] Others may think of an intelligent computer system with a mind of its own, such as Hal from 2001 A Space Odyssey.[7] What many don't realize is that artificial intelligence can also refer to simpler pieces of technology. For example, the voice recognition software on many smartphones falls under the category of artificially intelligent programming. An article published in Deloitte University Press provides that "[a] useful definition of artificial intelligence is the theory and development of computer systems able to perform tasks that normally require human intelligence."[8]

We are many years away from creating artificial intelligence with convincingly human characteristics, but our technology does allow us to create artificial intelligence that is capable of solving problems in a more efficient way than humans might be able to do un-aided. Artificial intelligence can fall into two different categories: hard and soft artificial intelligence.[9] Hard artificial intelligence refers to machines and programs that are capable of thinking and reasoning like humans.[10] Soft artificial intelligence is more relevant for use in the legal field, and refers to machines and programs that are able to do work that would traditionally be done by humans.[11] "Cognitive computing" is the name of the mechanism that enables machines to learn and complete tasks like humans.[12] As these machines tackle massive data sets, they seek out information that their programming instructs them to find.[13] In addition to doing what it has been taught by its programmers, a machine capable of cognitive computing also identifies patterns within the data and uses those patterns to create new solutions within the data.[14] These solutions are, in turn, used in the next data set and the next.[15] In essence, these machines are teaching themselves to be better at what they are programmed to do simply by doing it. After the initial learning process, artificial intelligence does not have to be retrained for each assignment, and it is capable of adapting its knowledge to

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[6] EX MACHINA (Film 4 & DNA Films 2015).

[7] 2001 A SPACE ODYSSEY (Metro-Goldwyn-Mayer 1968).

[8] Schatsky et al., *supra* note 1.

[9] Sobowale, *supra* note 2.

[10] *Id.*

[11] *Id.*

[12] *Id.*

[13] Schatsky et al., *supra* note 1.

[14] Sobowale, *supra* note 2.

[15] *Id.*

new situations.[16] The way that artificial intelligence learns through cognitive computing is similar to the way that human beings learn and become better at tasks. This ability is combined with the computational and analytical power that these machines and programs also possess, making for incredible efficiency.[17]

III. Artificial Intelligence in the Legal World

Because artificially intelligent programs are able to complete tasks that are traditionally performed by human beings, but at a more efficient rate, the main use of artificial intelligence in today's legal world is in areas that tend to be very time consuming and tedious for lawyers.[18] Of the artificial intelligence programs in use today, one of the most well-known is IBM's Watson.[19] Watson is an open cognitive computing platform that has been put to a variety of uses. Some of Watson's users' most notable achievements include beating the two best players on the gameshow *Jeopardy!* in 2011, splicing together the first artificial-intelligence-made trailer for a horror film, and helping to diagnose cancer patients through analysis of over 600,000 medical evidence reports, 1.5 million patient records and patient trials, as well as the text of medical journals.[20] Watson's ability to take on many diverse tasks makes it one of the most easily-harnessed artificially intelligent programs on the market. Watson's knowledge and ability continues to grow as its programing is put to new tests. IBM predicted that Watson would be able to pass the bar exam by 2016, a remarkable feat for a person, let alone a computer.[21] Watson has been applied to the legal field in the form of ROSS, a program that uses Watson's question-and-answer technology to answer legal questions in plain language.[22]

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[16] *Id.*

[17] Schatsky et al., *supra* note 1.

[18] Michael Mills, *Using AI In Law Practice: It's Practical Now*, Law Practice, July 2016, at 48.

[19] IBM Watson, https://www.ibm.com/watson/ (last visited Feb. 23, 2017).

[20] Carl Benedikt Frey & Michael A. Osborne, *The Future of Employment: How Susceptible are Jobs to Computerisation?*, Oxford Martin Programme on Tech. and Emp. 19 (2013), http://www.oxfordmartin.ox.ac.uk/downloads/academic/future-of-employment.pdf; Schatsky et al., *supra* note 1; Morgan (20th Century Fox 2016).

[21] Michael Mills, *Artificial Intelligence in Law: The State of Play in 2016*, Thomson Reuters Legal Executive Inst. (2016), http://www.neotalogic.com/wp-content/uploads/2016/04/Artificial-Intelligence-in-Law-The-State-of-Play-2016.pdf.

[22] Jim Kelly, *Artificial Intelligence and The Law: What to Expect*, ANewDomain (Nov. 04, 2016), http://anewdomain.net/2016/11/04/artificial-intelligence-and-the-law-what-to-expect/.

Recently, ROSS has been applied to legal research in bankruptcy law.[23] ROSS has had its successes, winning a finalist spot in IBM's Cognitive Computing Competition and signing on several large business law firms as clients, including Baker Hostetler.[24] A test of ROSS's operations has reported that the program is capable of taking care of some of the more time-consuming tasks that lawyers deal with, in order to make their practice more efficient.[25] Thomson Reuters announced in October 2015 that they planned to collaborate with IBM through the use of Watson.[26] Although no specific information was released publicly about Thomson Reuters' plans for Watson, one can only imagine how a platform like Watson could revolutionize the way that Thomson Reuters' customers are able to find and access data through their many databases for businesses and professionals. Thomson Reuters runs Westlaw, a popular legal database, and hinted at a summit in February 2016 that a beta version of Watson for legal research might be available in the near future.[27]

While IBM's Watson might be the most well-known example of artificial intelligence at work in the legal field, other companies have developed artificial intelligence tools that are being used in today's legal market. Beagle, an artificial intelligence tool made to read contracts, is being developed to make transactional law easier and more efficient for lawyers.[28] Beagle is designed to read a contract and pull out key information that a lawyer may need, but also to learn over time what sorts of information its user tends to look for and to build off of the patterns it recognizes. Beagle essentially teaches itself over time to read contracts in a way that is tailored toward the parties using it.[29] Another example of artificial intelligence advances in the legal field is eBrevia, a company that has made it its goal to make lawyers' lives better by eliminating drudge work.[30] In 2012, eBrevia launched their Diligence Accelerator Program, which aims to streamline legal due diligence.[31] eBrevia's programs work by analyzing documents that users upload to their server and extracting

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[23] Mills, *supra* note 21.

[24] *Id.*; Kelly, *supra* note 22.

[25] Kelly, *supra* note 22.

[26] *Thomson Reuters and IBM Collaborate to Deliver Watson Cognitive Computing Technology*, THOMSON REUTERS (Oct. 08, 2015), http://thomsonreuters.com/en/press-releases/2015/october/thomson-reuters-ibm-collaborate-to-deliver-watson-cognitive-computing-technology.html.

[27] Mills, *supra* note 21.

[28] BEAGLE.AI (last visited Feb. 23, 2017).

[29] Kelly, *supra* note 22.

[30] Sobowale, *supra* note 2.

[31] *Id.*

legal information from them, using the legal concepts it had been taught by its programmers.[32] This method of getting information from documents enables the program to gather information from databases efficiently, cutting costs by cutting the hours a firm would have to bill an associate for such work. As law firms feel pressure to keep clients happy by lowering legal costs, eBrevia's programs help to further that objective.[33]

Smart Apps are another genre of artificial intelligence technology being put into use at business law firms. These applications are capable of addressing legal questions by analyzing content that users upload or by accessing information stored in databases.[34] Smart Apps give clients immediate answers to their legal problems, and are relatively user-friendly.[35] One example of a Smart App at use in the business law world is Foley & Lardner's FCPA App, which allows the firm's business clients to ask the app payment questions anywhere, at any time.[36] Using this Smart App, Foley & Lardner has been able to expand their network of business clients further into the Fortune 500.[37] These are just some examples of different artificial intelligence programs that are emerging in the legal market, and no doubt many more are in development.

IV. How the Use of Artificial Intelligence May Affect Legal Jobs and Practice

The increasing use of artificial intelligence in the legal field brings up many questions. How will the streamlining of tedious legal work affect the number of attorneys a firm employs? Will the use of artificial intelligence lead to a decrease in hiring because there is less work to go around, or an increase due to a larger demand for legal work as technology makes legal costs more affordable? Authorities are split.

The Big Law model organizes firms into a pyramid hierarchy. On the bottom, associates and junior associates do the bulk of the "grunt work," including time-consuming research and due diligence.[38] On the top, a small group of partners bring in clients and assign tasks to the employees below

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[32] *Id.*

[33] *Id.*

[34] Wildisen, *supra* note 4.

[35] *Id.*

[36] *Id.*

[37] *Id.*

[38] Misa Han, *Boutique Law Firms Adopting 'Inverse Pyramid' Structure*, Fin. Rev. (Dec. 18, 2016, 3:28 PM), http://www.afr.com/business/legal/boutique-law-firms-adopting-inverse-pyramid-structure-20161124-gswpum.

them.[39]   The advent and implementation of artificial intelligence has the
potential to reform this pyramid structure into something more diamond-
shaped.[40] This diamond-shaped structure would have less junior associates at
the bottom performing tedious tasks, and more mid-level associates interacting
with clients and performing more meaningful and analytically fulfilling tasks.[41]
On the one hand, the rise of technology in the legal field has caused firms to
create new jobs to keep up with the times. Firms are inventing new positions
and putting lawyers in charge of research and development, or hiring
technology experts to implement artificial intelligence at their firms.[42]

On the other hand, increased automation and streamlining of work
normally allocated to the bottom of the pyramid could result in a decreased
need for lower-level associates as the work that would traditionally be theirs is
given to artificial intelligence programs to complete. Already, artificial
intelligence is pulling work away from legal professionals in certain business
settings. Over 60 million disputes between eBay sellers annually are now
settled by "online dispute resolution services" rather than by the legal system,
which is three times the number of cases filed in the United States court system
each year.[43] If the trend of replacing legal counsel with artificial intelligence
continues, one can imagine that this will eventually cause an upset in the legal
market. Firms will have to adapt, and lower-level associates may get the short
end of the stick as artificial intelligence programs are able to complete more
and more of the tasks that these attorneys would normally be assigned. Michio
Kaku, a professor of theoretical physics, predicts that "[t]he job market of the
future will consist of those jobs that robots cannot perform."[44] Even if the
move towards artificial intelligence in business settings and firms doesn't result
in a loss of jobs, it is likely that the legal industry will have to make big changes
to keep up with the growth of technology.

Many experts argue that, rather than replacing lawyers, artificial
intelligence will free lawyers from simple but time-consuming work and allow

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[39] *Id.*

[40] Sobowale, *supra* note 2.

[41] *Id.*

[42] Croft, *supra* note 3.

[43] Richard Susskind & Daniel Susskind, *Technology Will Replace Many Doctors, Lawyers, and Other Professionals*, HARV. BUS. REV. (Oct. 11, 2016), https://hbr.org/2016/10/robots-will-replace-doctors-lawyers-and-other-professionals.

[44] Mark A. Cohen, *How Artificial Intelligence Will Transform the Delivery of Legal Services*, FORBES (Sep. 06, 2016, 7:48 AM), http://www.forbes.com/sites/markcohen1/2016/09/06/artificial-intelligence-and-legal-delivery/#3119a7fa2647.

them to focus more on higher-value tasks.[45] One of the biggest sources of dissatisfaction among attorneys is with the amount of tedious work that they must complete. With artificial intelligence eliminating some of this work, lawyers will have more time to devote to clients and to perform more meaningful, intellectually challenging tasks.[46] For example, the CEO of ROSS has estimated that the program has the potential to save lawyers about 30% of their time by helping to answer legal problems quickly and efficiently.[47] In this way, artificial intelligence tools can lend a helping hand and increase work-satisfaction in business law firms. Lawyers who learn to use this new technology may find that they will become valuable assets at their firms as this technology becomes more common. Artificial intelligence does not work by itself, after all. Even the smartest artificially intelligent technology still needs a human operator to tell it what to look for and to feed it tasks.[48] Even if the absence of time-consuming tasks means that there will be less need for attorneys on the lower level of the business law pyramid, the rise of artificial intelligence will open up new jobs and new areas of law practice that we can only speculate about today.[49]

Using the automated systems of artificial intelligence tools might save lawyers' time and help to make rote and menial tasks more efficient, but it is difficult to imagine artificial intelligence replacing lawyers completely.[50] When a client goes to a law firm for representation, they expect low-cost and accurate work, but they are also seeking guidance and a personal touch. Client-relations are a very important part of the legal profession, especially in a business law setting, where clients may be entrusting the future of their business to their lawyers.[51] The law is a customer service profession designed to help clients, even where business and corporations are concerned. In this era of technology,

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[45] Croft, *supra* note 3.

[46] Sobowale, *supra* note 2.

[47] Joshua Mirwis, *Artificial Intelligence and the Legal Profession*, LAWCAREERS.NET (June 21, 2016), http://www.lawcareers.net/Information/BurningQuestion/Olswang-LLP-Artificial-Intelligence-and-the-legal-profession.

[48] *Id.*

[49] Jeff Bennion, *Are Robots Going to Take Our Legal Jobs?*, ABOVE THE LAW (June 21, 2016, 2:02 PM), http://abovethelaw.com/2016/06/are-robots-going-to-take-our-legal-jobs/?rf=1.

[50] *Id.*

[51] Jennifer Smuts, *Relationship Development in Today's Law Firm*, LAW PRACTICE TODAY (Aug. 14, 2015), http://www.lawpracticetoday.org/article/relationship-deve;opment-in-todays-law-firm/.

we humans still feel uneasy entrusting important matters to machines.[52] Until artificial intelligence has improved in accuracy and evolved to the point where clients feel comfortable utilizing it in place of a human lawyer, it is difficult to imagine these machines and programs replacing human beings in the legal workforce. Lawyers can rest assured that most legal jobs, especially those that involve working with clients, are safe for now.[53] The legal world is slow to change.[54] Even at firms with extensive artificially intelligent technology, it seems that human lawyers will still be as valuable tomorrow as they are today. Artificial intelligence is still very limited, and while these programs and applications are only able to perform simple time consuming tasks, we will still need lawyers to boldly go where these machines cannot.[55]

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[52] Jason Baldridge, *Machine Learning and Human Bias: An Uneasy Pair*, TECHCRUNCH (Aug. 2, 2015), https://techcrunch.com/2015/08/02/machine-learning-and-human-bias-an-uneasy-pair/.

[53] AlexK2009, *The Impact of Artificial Intelligence on Jobs in the Legal and Software Sectors*, SOAPBOXIE (Dec. 14, 2016), https://soapboxie.com/misc/The-Impact-of-Artificial-Intelligence-on-jobs-in-the-Legal-and-Software-Sectors.

[54] Sobowale, *supra* note 2.

[55] Kelly, *supra* note 22.