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ARTIFICIAL INTELLIGENCE AND ITS IMPACT ON THE LEGAL FRATERNITY

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ABSTRACT

The article endeavors to analyze the implications of artificial intelligence (AI) in the legal fraternity. There have been various reports on the impact and challenges of AI in the legal fraternity in recent years. AI is used to perform legal work previously completed solely by human lawyers. The rise of AI technology has caused a great deal of apprehension among members of the legal fraternity both in Malaysia and globally. AI promises to disrupt the substratum of how legal work is practiced and delivered. Nevertheless, there are implications encountered by the legal fraternity in adopting AI in legal practice such as ethical responsibility, algorithm bias, data privacy and the lack of regulations for AI. The doctrinal method was employed in conducting this study. The primary objective of this article is to evaluate the implications of AI adoption in the legal fraternity and to propose recommendations for better integration of AI in the legal industry.

Keywords: Artificial intelligence (AI), legal fraternity, implications, recommendations.

INTRODUCTION

The 21st century has brought significant technological advancements and transformations which have permeated all aspects of human life. It is predicted that artificial intelligence (AI) will unravel immense opportunities to transform and revitalize the law (Armour et al., 2020; Toews, 2019). AI technologies are advancing at an accelerating rate and are well on their way towards replacing human labour with machines (Simon et al., 2018). Globally, the legal industry is facing pressure to innovate and transform the way legal work is performed. The rise of data-driven technologies, fuelled by automation and AI advancements is promising a significant disruption to the traditional practices of the legal fraternity (Alarie et al., 2018). Although traditionally unfathomed by advancements in technology, the legal fraternity is not immutable to the pressures of transformation (Brooks et al., 2020). The legal fraternity has displayed resistance towards change which is often based on strong traditional beliefs in antiquated methods of practice, and that machines could never perform the creative work of human lawyers (Alarie et al., 2018; Susskind, 2017). Although often castigated for its reluctance in embracing emerging innovations such as AI, the legal profession is however beginning to pick up the pace (Alarie et al., 2018; Becerra, 2018). The focus of this article is on the implications of AI in the legal fraternity and the recommendations to encourage greater utilization of AI in legal practice. The primary objective is to evaluate how emerging technologies such as AI can transform the legal fraternity. The paper analyses the applications of AI specifically in e-discovery, contract analytics, prediction and legal research. In addition, this article furnishes insights into the challenges of transformation with AI in the legal fraternity. The final part of this article includes recommendations which may be taken into consideration in implementing the use of AI in the legal fraternity in Malaysia.

Susskind (2017) profoundly asserted:

“Tomorrow’s legal world as predicted and described here, bears little resemblance to that of the past. Legal institutions and lawyers are at a crossroad, I claim, and will change more radically in less than two decades than

they have over the last two centuries. If you are a young lawyer, this revolution will happen on your watch.” (p.16)

In addition to the above, specifically in relation to AI, Susskind (2017) posited that:

“In my view many of the current claims overstate the likely impact of AI over the next few years. On the other hand, extravagant though they are, I believe they understate the probable influence of technology in the very long term. Our machines and systems are becoming increasingly capable, and over time, they will take on more and more legal tasks that we have historically regarded as the unique preserve of legal practitioners.” (p.185)

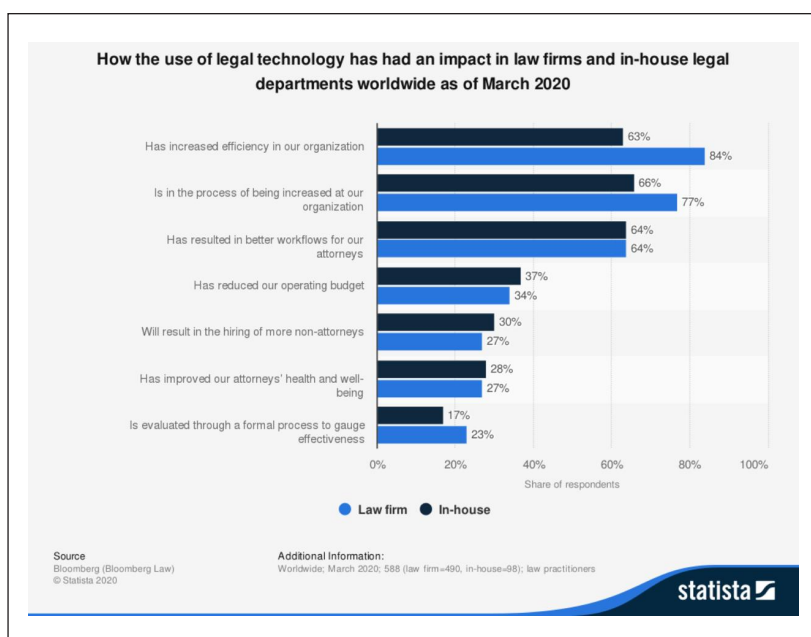
The aforementioned excerpt advocates that AI will augment legal services by eliminating the need for lawyers to spend hours on tedious menial work. This would enable lawyers to invest available time to engage in meticulous, creative and judicious legal reasoning (Bues & Matthaei, 2017). However, with automation of legal work, lawyers are still required to review the tasks performed by AI (Remus & Levy, 2017). This article considers both the positive and negative implications of AI in the legal fraternity. The legal profession is clearly vulnerable to disruption from AI (McGinnis & Pearce, 2014). There are a number of AI systems available in the market and there are more being developed with increasing computational powers. Existing literature indicates that AI enables new ways of delivering and augmenting legal services (Alarie et al., 2018; Gravett, 2020). These innovative tools are claimed to significantly reduce the time taken to conduct tasks such as legal research or due diligence. AI is alleged to speed up the time taken to complete legal tasks with greater efficiency and accuracy (Alarie et al., 2018). The main benefit of AI is centred on its ability to process insurmountable amounts of data with accuracy in a fraction of time. The risk of error is also often reduced to a bare minimum with the aid of AI (Alarie et al., 2018). Further, the advent of AI has enabled expediency in retrieving and processing stored data (Bhora & Shravan, 2018). However, with the ability of AI systems to perform routine legal tasks efficiently, it is asserted that AI may replace paralegals and junior associates in the future (Alarie et al., 2018). This in turn has the effect of changing the business structure of legal firms where firms would no longer require

a large team of paralegals or junior associates to perform routine tasks (Bhora & Shravan, 2018). It is argued that it is crucial that lawyers in a digital era be wary of emerging innovations and how they may impact their profession as they are not immune from change.

Figure 1 as follows shows the percentage of law firms worldwide which acknowledged that technology has the potential to advance efficiency in the legal industry. Based on the survey conducted, 84 percent of respondents (law firms) believed that automating routine tasks through technology is likely to increase efficiency in the organization.

Figure 1

How the Use of Legal Technology has had an Impact on Law Firms and In-House Legal Departments Worldwide as of March 2020



Source: statista.com

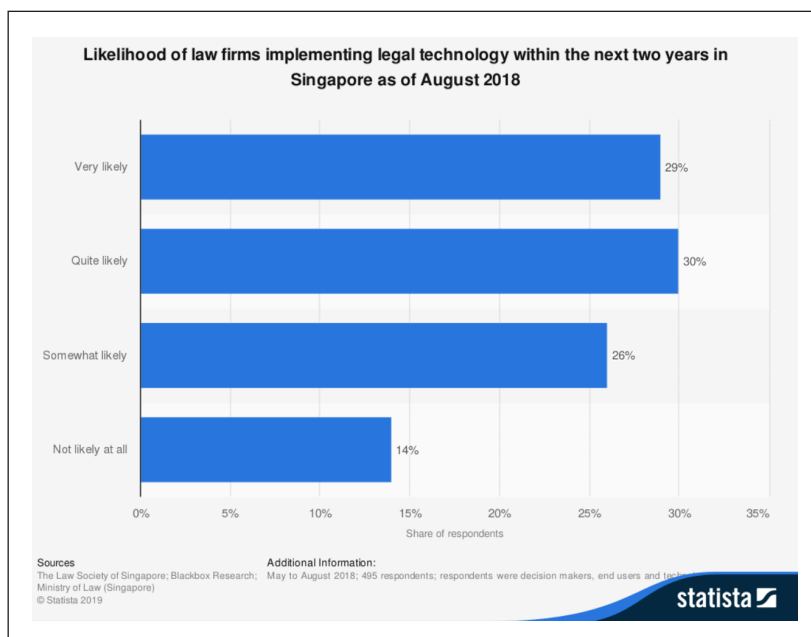
Figure 1 also shows that 64 percent of the respondents (law firms and in-house) believed that the use of technology results in better workflow for lawyers. Based on the data captured in Figure 1, generally legal professionals acknowledge technology as an effective

way to advance efficiency in legal work. The survey also revealed that legal technology enables law firms to save money in their operating costs (34%) and improves the well-being of lawyers (27%).

Further, as indicated in Figure 2, based on a sample study carried out in August 2018 in Singapore, in the following two years, 29 percent of respondents disclosed that their businesses were very likely to introduce new legal developments, while 30 percent said that it was very likely to do so. Despite a significant number of respondents viewing technology integration favourably, Singapore's legal sector is still in the embryonic stage of adopting legal technology as of 2018.

Figure 2

Likelihood of Law Firms Implementing Legal Technology within the Next Two Years in Singapore as of August 2018



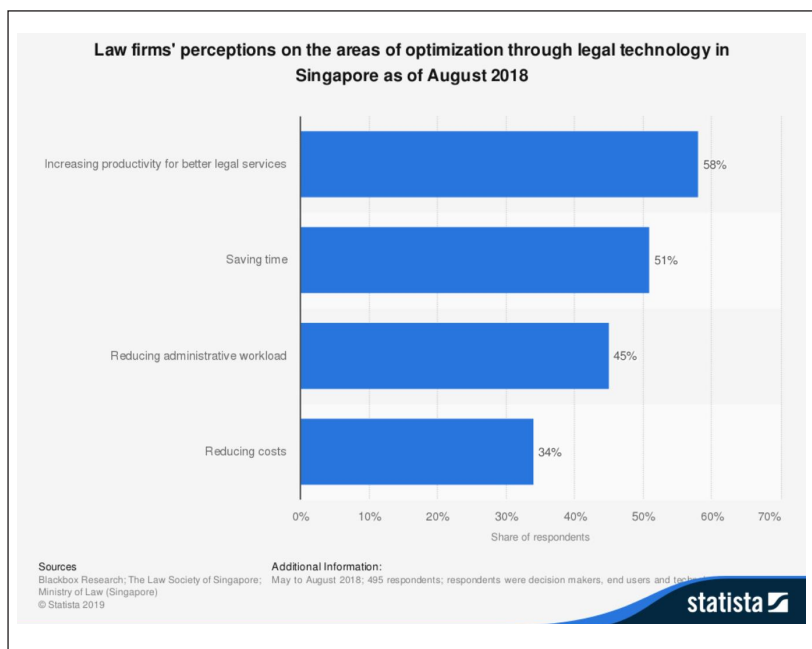
Source: statista.com

As indicated in Figure 2, the survey revealed the future trend of law firms in Singapore towards positively embracing legal technology to facilitate legal work.

In addition, Figure 3 shows that law firms in Singapore perceived that the quality of legal work can be optimized with the implementation of technology in the legal fraternity.

Figure 3

Law Firms' Perceptions on Areas of Optimization Through Legal Technology in Singapore as of August 2018



Source: statista.com

Figure 3 shows that 58 percent of respondents in a 2018 sample study on legal technology, comprising executives and decision makers in Singapore felt that legal technology would be ideal for improving efficiency in the delivery and performance of legal services. Furthermore, 51 percent of the respondents believed that the use of technology saves time in performing legal tasks and 45 percent acknowledged that technology is able to reduce administrative workload. The survey also revealed that 34 percent of the respondents acknowledged that the use of legal technology reduces operational cost.

Based on the survey results, technology is seen as making a positive impact in the legal fraternity and it is foreseeable that there will be greater adoption of legal technology in other forms including AI in the legal fraternity in the near future.

The legal industry in Malaysia is worth RM24.3 billion and is one of the largest contributors to small and medium enterprises (SMEs) in terms of professional services (Wong, 2019). There were a few legal tech start-ups in Malaysia that were prohibited from operating due to restrictive regulations in the Legal Profession Act 1976 and the Legal Profession (Practice and Etiquette) Rules 1978 (Damanhuri, 2019). In recent years, there has been a slight increase in the use of legal technology in Malaysia. However, it is significantly lower than other regions around the globe. It is crucial to evaluate the implications of AI in the legal fraternity as it enables further grasp on the benefits of implementing such tools in legal practice. This rests on the premise that although AI is able to improve efficiency it is pivotal to equally ensure safe and ethical AI implementation in the legal fraternity. The legal scene in Malaysia and the proposed recommendations will be discussed further in the later part of this article.

Roots of Artificial Intelligence

The concept of intelligence is generally thought by humans to be almost uniquely human and AI is usually measured with reference to human characteristics (Legg & Bell, 2019; Scherer, 2015). AI is defined in its literal sense as machine intelligence. The history of AI dates back to the thinking machine developed by Turing in 1950 (Gill, 2020). The test applied in determining whether a machine is AI is whether it mimics human intelligence (McCarthy, 2007). There are different ways in classifying AI and there is a myriad of ways on how AI is defined. AI is categorized into Narrow AI and Strong AI, also known as Artificial General Intelligence. Narrow AI are systems which are trained to perform a specific task. It does not have the ability to perform analytical deductions and reasoning (Alarie et al., 2018; Semmler & Rose, 2017).

In comparison, Strong AI is defined as systems which are able to reason like a human being, possessing common sense and the ability to make complex analytical deductions. To date science has yet to develop

Strong AI (Gravett, 2020). McCarthy (1956) is believed to have coined the word “Artificial Intelligence”; he defined AI as having the ability to simulate human intelligence. This article adopted McCarthy’s (1956) definition of AI which is allowing a computer to replicate or simulate human intelligence in a machine enabling machines to perform tasks that characteristically require human intelligence. It is important to note that in defining AI, human intellect is ascribed to the indicator of what AI does (McCarthy, 1956). In distinguishing human intelligence and AI, the brain is defined as having the knowledge and capacity to think abstractly, objectively and reliably, find, lay and identify similarities, solve challenges, uncover rules in apparently disordered material with current expertise, solve new tasks, respond flexibly to new circumstances, and learn individually, without the need for clear and full training (Alarie et al., 2018). In contrast, AI is unable to think abstractly and deduce analytical reasoning (Becerra, 2018). Based on current developments in computing power, AI does not have self-awareness or the ability to understand consciousness (Becerra, 2018). This is known as one of the major limitations of AI.

AI subdisciplines include Natural Language Processing (NLP) and Machine Learning (ML) (Semmler & Rose, 2017). Natural Language Processing involves examining the use of keywords and expressions and establishing a link or connection with these words either in the written or spoken language (Baker, 2018). Machine Learning enables computers to continually advance and optimize certain tasks. This process does not require explicit pre-set rules-based programming (Alarie et al., 2018). Natural Language Processing differs from keyword search in that it enables the user to identify search materials that are pertinent to their search even if the materials do not have the exact words as expressed in the keywords list. (Alarie et al., 2018).

LITERATURE REVIEW

Artificial Intelligence and the Legal Fraternity

AI is able to perform many computational functions with accuracy and precision (Remus & Levy, 2017). It has been argued that AI is more accurate than the expert lawyer (Alarie et al., 2018). Further, it is not susceptible to human frailties such as fatigue and emotions

(Remus & Levy, 2017). The discussion here however focuses on the main areas of AI application in the legal fraternity. Emphasis is placed on ‘proven technology’ that has already been established to be useful in legal practice (Dabass & Dabass, 2018; Reiling, 2020). There are various AI systems available in the market and the following are some examples of established systems in the legal fraternity.

Current Applications of AI in the Legal Fraternity

AI has mainly impacted legal processes such as analytics and discovery (McGinnis & Pearce, 2014). This is primarily due to the ability of algorithms in executing rule-based problems with precision and accuracy. Primary applications of AI in the legal fraternity are listed as follows.

i. E-Discovery and Predictive Coding

Machine Learning and Natural Language Processing are AI techniques which are utilized to classify specific document topics and search these documents for pertinent information (Nelson & Simeck, 2017). There are many technology-assisted research (TAR) systems available in the market. Catalyst, for example, is an AI programme that is able to review 723,537 documents in five days (Nelson & Simeck, 2017). This software permits users to convert a document to digital format and then execute different sets of redactions on a single document by searching for a word or phrase (Faggella, 2020). It is noteworthy to mention that although AI tools for e-discovery and predictive coding are both cost and time efficient, there are certain drawbacks such as the high upfront investment expenses which may be required for implementation purposes, and the limited scope of review as most TAR systems work only with text and is unable to process images or videos (Legg & Bell, 2019). In a similar vein, irrespective of its efficiencies, lawyers would still be required to do a final review to ensure that there is nothing missed out by the system. Another important factor which should be taken into consideration is whether small firms find it worth the investment, thus scalability and relevance also play a role in determining the benefits of TAR systems.

ii *Contract Analytics/Due Diligence*

Contract review AI systems are mainly used to review documents and flag risky clauses. These AI systems are able to review documents in seconds, completing tedious tasks that once required long hours to finalize. JP Morgan Chase COIN (Contract Intelligence) is an example of a software which is able to save 360,000 hours of contract review work annually by lawyers (Nelson & Simeck, 2017). The software is able to review voluminous documents in a matter of seconds saving legal costs (Weiss, 2017). It also reduces mistakes attributed to human error and improves the process of document review by extracting meaningful information (Nelson & Simeck, 2017). Although the speed and efficiency of AI in conducting due diligence is welcoming, it is important to realise that over reliance should be avoided as these systems are not infallible (Sipper & Moore, 2017; Manap & Abdullah, 2020). Thus, despite the accuracy which is often associated as a key feature of AI systems, lawyers are still expected to review the final draft so as to avoid the possibility of AI performing a poor quality document review. Even though these tools may assist in tedious and repetitive tasks, they are not sufficiently advanced to perform complex analytical deductions and hence may be limited in ambiguous contracts. Another important consideration is the high costs associated with the implementation of AI in conducting due diligence, which may hinder successful adoption by smaller legal firms.

iii. *Predictions*

AI systems are able to make predictions on litigation outcomes. The English term for this is predictive justice (Reiling, 2020). The AI systems are able to forecast the outcome of a case based on previous cases and judges' rulings. Lex Machina is an example of predictive software which was acquired by Lexis Nexis in 2015. This AI system is able to transform data from court cases into live charts. Lexis Advance is a legal research service that includes Lex Machina litigation analytics (Nelson & Simeck, 2017). It provides a brief description of a judge's biographical information, open cases by area of practice, evaluations to other district judges, cases submitted by year

and case schedules (Nelson & Simeck, 2017; Remus & Levy, 2017). The objective data provided enables lawyers to make decisions based on facts. Predictive technology though less commonly employed by lawyers is advantageous as it aids in predicting the success probabilities of a dispute. Additionally, it enables lawyers to be better prepared in their arguments and defence by evaluating the strengths and weaknesses of legal briefs and written arguments (Goodman, 2019).

iv. Legal Research

Legal research is one of the earliest forms of AI in the legal industry; examples are software such as Westlaw and Lexis Nexis. However, early forms of technology for legal research were based on keyword searches. This form of search creates the problem of yielding massive amounts of results that must be scrutinized to determine its significance to the subject at hand, indicating a higher level of human involvement despite the systems being autonomous (Becerra, 2018). AI systems available in the market today are however more advanced and are able to optimize search results as it replaces keyword search with semantic searches. This form of search mechanism enables greater personalization as the system continues to learn and improve itself as a result of Machine Learning (Nagarajan & Thyagarajan, 2012).

By observing the recent advancements and capabilities of AI, it is quite difficult to assume that lawyers do not have to worry about being replaced by AI systems. However, Alarie et al. (2018), posits that whether AI is truly beneficial to the legal fraternity would depend on whether the legal profession reconsiders the provision for legal services. It is therefore pivotal to understand the existing challenges of AI application in the legal profession in order to assess the extent of disruption in the legal fraternity (Armour et al., 2020). In addition, it is crucial to comprehend the sources of resistance and other challenges to AI adoption as perceived by the legal fraternity in evaluating the implications of AI in legal practice. However, although AI is able to perform menial, routine administrative tasks efficiently and improve productivity, these systems are nevertheless limited in its capabilities and are unable to perform high level analytical deductions. AI would be unlikely to impact lawyers who provide specialized and bespoke

legal services (Susskind, 2017). Though there is no consensus on how AI may ultimately shape the legal profession and whether the fraternity would be made obsolete in the future, existing literature asserts that AI will continue to permeate the legal fraternity (Armour et al., 2020; Waisberg & Hudek, 2021).

Artificial Intelligence as a Disruptor

Disruption is defined as an interruption to an event, activity or process. In the context of this article, disruption refers to the replacement of an existing sector, industry or technology by something innovative and more effective (Legg & Bell, 2019). Susskind (2017) posits that lawyers are sometimes referred to as custodians of specialised expertise, however in the digital era, knowledge is no longer within the exclusivity and domain of legal professionals. In the past, humans were a critical component in managing knowledge, however AI is able to do much more at a speedier and grander scale due to developments in Natural Language Processing and Machine Learning. AI is at its resurgence due to the increased growth of computing power and availability of data. Globally, the legal fraternity has started to focus on the dynamisms of disruption and how they may impact the legal profession (Legg & Bell, 2019). For example, the Canadian Bar Association established a Legal Futures Initiative in 2014 which published a report on the transformation of legal services with the advent of technology. This was followed by the Law Society of England which published The Future of Legal Services report in 2016. The American Bar Association through its establishment of the Commission on the Future of Legal Services reported in January 2016 on the influence of technology in the legal profession. These reports primarily highlight the acknowledgement about the future of the legal fraternity with emerging technologies such as AI and how innovative solutions may be deployed to enhance legal services.

In a study conducted on contract review, it was disclosed that the COIN (Contract Intelligence) software was able to perform the review task efficiently in 26 seconds (Davis, 2020). Based on the results of the experiment conducted, on average the participating lawyers took 92 minutes to review the files. This is a stark difference to AI which completed reviewing the files in a matter of seconds (Davis, 2020; Umali, 2018). In a case study conducted in the United Kingdom, with

100 lawyers from London firms against the AI software called “Case Cruncher Alpha”, the software was able to predict with an accuracy rate of 86.6 percent compared to 66.3 percent by the lawyers. The question arises as to whether lawyers can keep up with AI as it further advances and reaches the accuracy rate of 100 percent? (Ting, 2017). As technology is exponentially growing and with further advancements in Machine Learning, it is predicted that AI will soon replace many legal tasks which are currently within the exclusive monopoly of the legal fraternity (Susskind, 2017). According to Alarie et al. (2018), this is possible because the learning skills of machine intelligence advances and improves significantly with continued use.

Artificial Intelligence Threatening the Legal Fraternity

With the recent advancements in computing especially in Machine Learning and Natural Language Processing, it is discerned that cognitive computing systems are able to analyse complex data sets. According to Kelly (2015), artificial intelligent systems are now able to understand, reason and learn through its continuous use. AI increasingly enhances its knowledge based on the human operator’s feedback on the accuracy of output given (Remus & Levy, 2017). In addition, these systems are capable of developing their own programme based on examples. Machine Learning algorithms are ‘self-learning’ and can mimic to a certain extent the way the human brain functions (Marr, 2018). Further, based on the current developments of AI and Machine Learning, these systems are increasingly capable of analysing large amounts of data in an astoundingly short span of time (Simon et al., 2018). In addition, with every output, these systems continue to learn and better themselves, generating predictions with greater accuracy (Kelly, 2015).

It is predicted that the reduction of time required for process-driven work may increase the possibility of displacing jobs in the legal fraternity (Remus & Levy, 2017). Further, the advancements in Reinforcement Learning (RL) which is an alternative approach to developing AI, enables the systems to find solutions without the knowledge of the domain (Stooke & Abbeel, 2018). The progress in RL is significant and may make an impact in the legal fraternity as the technique is preferred to solve complex problems. Further, it is posited that the RL model is very similar to humans and hence is able to achieve perfection (Stooke & Abbeel, 2018).

Predictive technology systems which generate results that forecasts litigation outcomes may prove to be disruptive to lawyers since huge insights on legal risk management might be created by algorithms acting on large datasets without the involvement of lawyers (Susskind, 2017). As more complex datasets are made available to AI, its predictive power will escalate and its ability to go through huge amounts of data with speed is a factor which sets out to displace lawyers in legal prediction. With exponential advancements in computing power as discussed and the promise of delivering innovation, efficacy and velocity, AI is seen as a threat to the legal fraternity. However, it is observed that current AI which is limited in its capabilities will not displace lawyers who engage in complex analytic work. AI systems lack the ability to think creatively which is essential in problem-solving (Legg & Bell, 2019). In addition, legal issues which have no existing case laws and precedents are challenging for AI systems. As a result, it is not viable to make broad generalizations about the influence of AI on the legal profession. Factors such as the role of a lawyer in a particular area of practice and their expertise should be taken into consideration.

Consequently, there are however two observations which should be highlighted here. Firstly, the applications of AI are not proven to be successful in all areas of law, especially in complex cases where there are unresolved ambiguities and the absence of binding precedents. Secondly, there are no existing regulations to ensure safe and ethical AI implementation in the legal fraternity. The current status quo is unfavourable as it indicates an additional responsibility on the legal profession to ensure that AI is safe prior to utilization in legal practice.

There are certain challenges with AI implementation which may hamper the successful adoption of AI in the legal fraternity. This part of the article highlights the current challenges in implementing AI in the legal fraternity.

Challenges of AI in the Legal Fraternity

i. Algorithm Bias

The issue of bias remains a main concern of AI adoption in the legal fraternity. AI systems are known to have inherent

algorithm bias which is inevitable (Remus & Levy, 2017). Data encoded by programmers and developers may have known bias on racial, gender, communal or ethical aspects. Since AI systems are programmed based on human-made decisions, it is susceptible to the human values of its creators. Herein, lies the issue as AI which is prone to biasness may impact the outcome of an analysis or solution. AI systems which are programmed on data where certain nationality or race are associated with certain crimes, represent one of the primary concerns with AI and its application in the legal fraternity (Alarie et al., 2018). According to a study conducted by the AI Now Institute at Breakthrough York University, rich white males are more likely to discover and develop new AI technology. According to researchers, as a consequence, the systems learn from and reinforce racial and gender bias trends in the past. Likewise, the benefits of such institutions, from profit to efficiency, go largely to those who are already in positions of power, who are white, educated, and male (Lauterbach, 2019).

In the legal context, machine learning is used by tools such as COMPASS to predict the likelihood of reoffending. These tools are programmed based on historical data pertaining to offenders who have been granted parole. As a result, the bias is already incorporated into the historical data. In many cases, systematic bias in the prison system, as well as other societal issues, contribute to the data producing this result. Thus, algorithms may amplify and reinforce prejudices, as well as introduce new ones (Legg & Bell, 2019). This is because these systems were created by people and programmed on data collected. The biases inherent in human data may be reinforced, scaled, and exacerbated when systems are based on human data. It is proposed that in order to ensure responsible and reliable AI, there must be heightened awareness of those biases in order to investigate and challenge the results (Brennan & Henderson, 2019).

The lack of transparency in these systems which are also known as the ‘black box’, further amplifies the challenges of AI deployment in the legal fraternity. Current developments in AI are focused on providing AI systems with unbiased data and

to develop algorithms that can be explained. This is to promote meaningful transparency in data. It is important to be heedful of the context of the results and the implementation of the data by artificial intelligence so as to minimize potential algorithmic prejudices (Lin, 2019). As the legal landscape changes, lawyers will be called upon to weigh in on bias issues in order to assist their clients in detecting, preventing, mitigating, and allocating responsibility for bias-related errors. This would suggest that members of the legal fraternity would have to be equipped with some technical knowledge on innovative solutions such as AI in order to effectively provide competent representation to their clients.

ii. Cost of Implementation

AI systems are costly to implement and may be a barrier for small or mid-tier firms which have limited funding for investments (Remus & Levy, 2017). The technology requires a significant investment at the onset and additional factors such as training and maintenance may also increase the overall cost of the use of AI in the legal fraternity. Hence, it may be out of reach for smaller firms.

iii. Ethical Implications

The main concern of the use of AI today is often centred on ethical issues as a result of AI application in legal practice. Lawyers have an ethical responsibility to ensure competence and diligence (Nunez, 2017). This may indicate an added responsibility placed on lawyers to understand the logic used by AI and the capabilities and limitations of AI systems (Rogers & Bell, 2019; Scherer, 2015). However, it is a major challenge for lawyers to understand the intricacies of a particular AI being used as lawyers are not known to be legal technologist (Susskind, 2017). Further, the complexity of the AI systems itself, also known as the black box of AI, poses a challenge for lawyers (Nunez, 2017; Yu & Ali, 2019).

iv. AI Oversimplifies

Law is strongly reliant on the meaning of words, how they are combined, the implicit and explicit knowledge, argumentation

and interpretation (Alarie et al., 2018). AI is believed to oversimplify and to purely focus on pattern recognition. There are many areas of law which lack definite patterns. There are situations where a legal dispute has no preceding cases, status or regulations that may address those facts. It is asserted that AI is unable to construct arguments in such situations (Gravett, 2020). Gravett (2020) posits that although AI is capable of accuracy, it is however unable to get around the implicit meaning in law. In addition, skills such as the ability to litigate across jurisdictions with distinct kinds of legal systems, cultural aptitude, linguistic skills, and the ability to comprehend a variety of social contexts are presently beyond the realm of AI (Campbell, 2016).

v. *Data Privacy & Virtual Threats*

The use of AI software in conducting legal work may pose certain risks. As these systems are able to absorb large amounts of data, there is potential threat to a client's information and consequently to a lawyer's reputation. Cyber-attacks on law firms are prevalent and is a knowingly growing threat (Calo, 2015). Lawyers are thus faced with unprecedented challenges in ensuring client's information are secured and not exposed to any potential breach. This is especially pertinent in cases where legal dispute concerns extremely sensitive and confidential information.

vi. *Lack of Transparency*

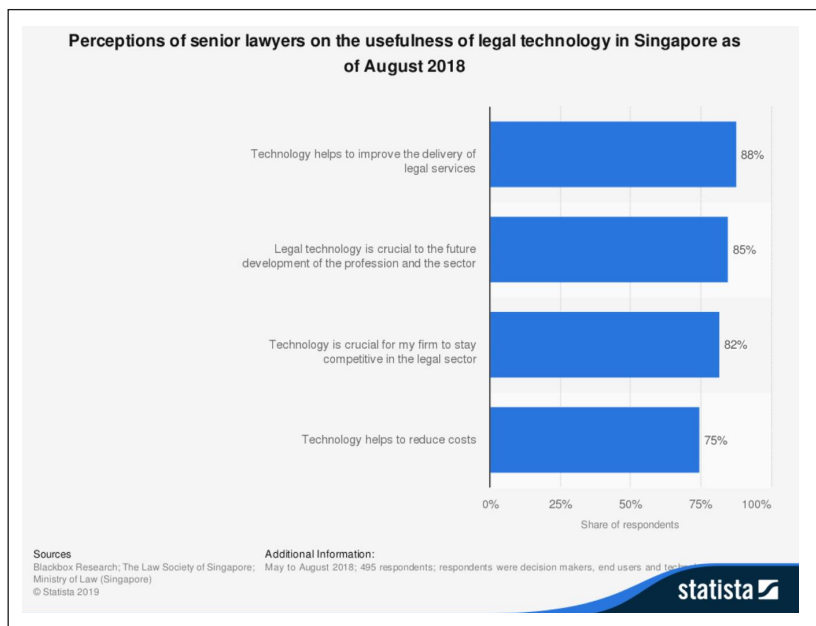
The lack of transparency in AI systems is considered as a serious flaw in ensuring safe AI application. Data processing processes should be made clear and comprehensible, and external audits should be required. The user of an algorithm must make public the choices made, and the data and assumptions used, in a complete, timely and acceptable manner so that these choices, data and conclusions are open to third parties (Reiling, 2020). Such comprehensive, prompt and meaningful transparency would make it less challenging to evaluate the choices made and the evidence, logic and conclusions used, so as to provide adequate legal security from decisions based on those choices, data, reasoning and assumptions, including the potential of judicial review by the courts (Reiling, 2020).

vii. *Cultural Barrier*

The legal profession is known to be traditional, often resilient to the waves of evolution brought by technology. To date the legal fraternity has remained largely undigitized as there are still certain members of the legal fraternity who are reluctant to embrace emerging innovations such as AI, dismissing it as a mere hype or phase that will soon pass (Susskind, 2017). However, the trend might be changing as there has been greater acceptance of technology in recent years. Figure 4 as follows illustrates that 88 percent of senior lawyers in Singapore perceived technology as a means towards improving the efficiency and delivery of legal services.

Figure 4

Perceptions of Senior Lawyers on the Usefulness of Legal Technology in Singapore as of August 2018



Source: statista.com

In a sample study on legal technology among leaders and decision makers conducted in Singapore in 2018, 85 percent of respondents

believed that technology is critical to the legal profession and industry's future growth, with 88 percent agreeing that technology aids in the delivery of legal services. In addition, 75 percent perceived that technology helps to reduce costs. The data in Figure 3 indicates that there is a changing trend among senior lawyers, illustrating a greater acceptance of legal technology to advance efficiency and quality of legal services.

METHODOLOGY

This study was conducted following the doctrinal research approach. It was primarily based on library and internet sourced articles and websites. It relied on secondary sources on AI and legal technology available from books, journals and websites from relevant authorities such as HeinOnline (www.heinonline.com), Statista (www.statista.com), the American Bar Association (ABA) Journal (www.abajournal.com) and TheEdgemarkets (www.theedgemarkets.com). The approach taken was a qualitative doctrinal research method (Yaqin, 2007, p.10). The doctrinal method was considered appropriate to this research since it entailed contextual reading, discovering primary materials, recognizing contemporary legal problems, collecting relevant facts, scrutinizing existing legal discrepancies, and reviewing all subject matters within the context (Yaqin, 2007). The primary objective was to advance new knowledge by evaluating the conceptions associated with AI in the legal fraternity and to consider proposed recommendations (Hutchinson & Duncan, 2012). This study was purely conceptual and analytical. The doctrinal method was considered as appropriate to this study as it involved identifying key implications arising from AI adoption in the legal fraternity.

DISCUSSION

Are Lawyers a Dying Breed?

With headlines such as “Here Come the Robot Lawyers” (O’Toole, 2014), “Why Hire a Lawyer When a Robot Will Do?” (Ou, 2016), “Machines v. Lawyers” (McGinnis, 2014) and “Armies of Expensive Lawyers Replaced by Cheaper Software” (Markoff, 2011), there is a

heightened expectation as to the capabilities of AI and the bleak future of redundancy for lawyers (Davis 2020; Legg & Bell, 2019). The legal profession, lawyers, judges and legal education faces disruption, mostly because AI technology acts as a disruptor in the legal industry automating many parts of legal work initially performed by lawyers (Armour et al., 2020; Ribstein, 2010). However, there are certain positive implications with AI integration in the legal fraternity. According to Alarie et al. (2018), as AI continues to expand, it will create increasingly stiffer competition in the legal services market. This will also create a ripple effect towards advancing greater efficiency in legal services. AI augments the legal discovery process because it completes it more efficiently with greater speed (Remus & Levy, 2017). Tools such as OpenText and Relativity minimize the involvement of human lawyers in the e-discovery process which saves legal costs (Moore v Publicis Groupe, 2012).

Through greater developments in Machine Learning, documents can be generated, customized to the specific requirements of an individual (Alarie et al., 2018; Lin, 2019). AI tools utilized for documents analysis are also increasingly becoming more efficient in assessing liabilities and risky clauses in a contract. With increasingly capable AI systems, the question arises as to the future of lawyers in the legal industry (Susskind, 2019). It is predicted that with AI, lawyers face the possibility of losing their jobs, especially paralegals and junior associates (Connell, 2018; Goodman, 2019). Legal professionals who steadfastly cling to archaic and antiquated practices of law may soon be replaced by AI (Alarie et al., 2018; Susskind, 2017). It is thus crucial for members of the legal fraternity to assimilate to stay relevant and competitive in a digital era. From a different perspective, however, there will be less substandard lawyers in the industry. In addition, Susskind (2017) predicts that AI should be utilized as a leverage for firms to provide bespoke and niche services. This will enable greater opportunities for lawyers to draw in clients as they will be considered more distinguished in the legal industry.

However, there are certain areas of law where AI will not be able to entirely replace human lawyers. This is especially in criminal and family law practice where human interaction is considered a vital aspect in legal work (Rogers & Bell, 2019). In addition, currently AI is not able to provide oral representation for clients in courts. More

imperatively, legal work involves more than legal research, hence AI will not replace lawyers entirely as this technology is still limited in its capabilities (Remus & Levy, 2017).

Predictions of the Future of the Legal Profession

The realms of AI have much to be explored, hence it is not possible to predict with certainty the future of lawyers. However, it is possible to foresee that AI will continue to evolve increasingly in its efficiency and velocity. It is conceivable that a hybrid approach where lawyers work together with AI is more likely rather than totally replacing human lawyers in the legal ecosystem (McKamey, 2017). AI machines will continue to augment legal services enabling lawyers to concentrate their time on more imperative legal tasks such as analyzing results and advising their clients. It is unlikely that AI will replace the requirement for critical thinking (Sahota, 2019). It is posited that the development of AI will create greater opportunities for lawyers to leverage the technology for the betterment of legal services (Alarie et al., 2018). Instead of replacing lawyers, technology such as AI will support and enhance the legal fraternity in the delivery of legal services (McKamey, 2017).

The Legal Scene in Malaysia

The legal industry in Malaysia is currently not at the forefront of the technology scene. Legal technology growth in Malaysia is considerably slower than in other parts of the world, such as the United States, United Kingdom and Commonwealth nations, including Singapore and Australia (Low, 2019). The Legal Profession Act 1976 (LPA) appears to be the main barrier towards enabling swifter implementation of technology such as AI in legal practice. S.37 of the LPA prevents an “unauthorized person” who is not an advocate and a barrister from performing any legal services. Legal technology start-ups such as LegalZoom and Rocket Lawyer were previously restricted from operating due to the regulative restrictions in LPA (Foong, 2019). Although past attempts were futile, there is a possibility of greater implementation of technology in the near future since the proposed amendments to the LPA has been made to the Malaysian government by virtue of the new S.35 of the LPA (Foong, 2019). Although legal technology is still at its infancy in Malaysia, there is nevertheless a need to create awareness and encourage greater implementation of emerging technologies especially AI.

It is crucial that the legal fraternity in Malaysia embrace emerging innovations such as AI to enhance greater efficiency in legal services. Members of the legal fraternity in Malaysia should improve and adapt to transformation in the age of technological revolution in order to stay relevant and competitive in a digital society (Ting, 2017). The Chief Justice of Malaysia, Tan Sri Tengku Maimun Tuan Mat in her opening speech of the legal year 2020 said that it is crucial for the legal profession in Malaysia to utilize technology as a means towards improving access to justice and efficiency in court processes (TheEdgemarkets, 2020). Her Lordship said that in the rapid permeation of the Fourth Industrial Revolution, technological developments serve predominantly to advance greater access to justice and should be optimized.

Current digitalization of court processes in Malaysia includes e-court procedures, court recording and transcription (CRT), case management system (CMS), queue management system and e-filing systems. The implementation of the E-Appellate system has also marked a major improvement in the court process enabling virtual hearings and relinquishing the requirement for hardcopies of voluminous documents to be submitted to the court (TheEdgemarkets, 2020). Her Lordship Chief Justice Tan Sri Tengku Maimun Tuan Mat also emphasized that it is pivotal for the Bar and the Chambers to move forward in embracing digitalization (TheEdgemarkets, 2020). Thus, in line with this vision, it is timely that the legal fraternity in Malaysia utilizes available technological tools such as AI to advance greater efficiency in legal services.

Recommendations for Greater Integration of AI in Malaysia

This part of the article highlights the recommendations towards enabling greater utilization of AI in the legal fraternity in Malaysia.

i. The Legal Profession Act 1976

The Malaysian Bar Council has taken the initiative to address the concerns of the development of legal technology in Malaysia. The establishment of the Innovation and Future of Law Committee is seen as a step forward towards ensuring that necessary regulatory framework is determined prior to AI implementation. The primary aim is to ensure that the interest

of the public is safeguarded against any possible risks which may arise as a result of utilizing AI systems in legal practice. In addition, the Bar Council has also recommended amendments to the Legal Profession Act (LPA) 1978 (Foong, 2019). The provision, S. 35 of the new Act aims to enable greater inclusion of technology in the legal fraternity taking into consideration developments in emerging innovations and solutions. The section defines legal technology as “any technological products or service used or to be used in the provision of any service or any act which is within any function or responsibility of any advocate and solicitor, or places at the disposal of any person the services of an advocate and solicitor” (Jalil & Sheriff, 2020). Although the new provision does authorise the Bar Council from restraining legal technology providers in offering their services, it is nevertheless a welcomed progress in contrast to an absolute exclusion on the adoption and use of technology in the legal fraternity (Jalil & Sheriff, 2020). In a similar vein, it is argued that the new provision limits the possibility of issues on unauthorized practice of law arising if technological tools and software are utilized by lawyers in legal practice. This is also to ensure that members of the legal profession are protected against the possibility of malpractice suits for unauthorized practice of law.

ii. The Role of Regulators

It is crucial that regulators and relevant stakeholders including developers of AI technology and members of the legal profession work together to establish a viable and feasible model for the legal fraternity to utilize AI effectively in legal practice. As AI continues to advance, it is crucial that the use of AI is effectively regulated to prevent infringement of human rights and to protect parties against possible loss caused by erroneous AI in legal practice (Manap & Abdullah, 2020). Adequate guidelines should also be established prior to AI implementation in the legal fraternity in Malaysia as it would enable a smoother integration of these systems in legal work (Damanhuri, 2019). The justification in regulating AI is complex as a balance must be achieved in protecting public interests whilst enabling continuous innovation (Petit, 2017; Scherer, 2015). Accordingly, one of the essential roles for

executives, politicians, and regulators in the years ahead centres around how best to reform a twentieth century legal system to account for twenty-first-century legal tech advancements such as AI without undermining the significance of human driven missions of justice, due process, ethical implementation and democratic ideals such as fair participation and meaningful transparency (Lin, 2019).

iii. Is a Malaysian Charter on Artificial Intelligence Needed?

A foreseeable challenge for the legislature once AI is implemented in the legal profession would be to determine the status of AI. A charter may be recommended to deal with some of the challenges as raised in this article. Further, a directive may be required from the developers of AI to ensure the ethical conduct of these systems prior to integration in the legal fraternity. This directive would ensure that developers and programmers act responsibly and with due consideration towards the need for privacy and safety of humans (Castel & Castel, 2016). The Canadian draft report prepared by the Committee on Legal Affairs of the European Union provides that developers and programmers shall dedicate themselves to the highest ethical and professional standards to abide by the values towards safe and ethical AI implementation (Castel & Castel, 2016). However, it is imperative that any proposal for a Charter stipulates the rights and obligations of AI including the principles governing future developments in AI. This would safeguard the legal fraternity against any liability issues such as malpractice suits and other concerns on legal accountability which may arise following the implementation of AI in legal practice. In addition, the existence of a charter reduces the complexity of AI application in the legal fraternity as there are guidelines stipulating each party's rights and responsibilities which includes developers and end users. Further, a charter may provide assurance to the legal fraternity that AI systems deployed are ethically designed.

However, it is posited that a unified approach towards regulating AI is preferred and overarching laws and regulations are not advisable as it may stifle the progress for innovation

(Legg & Bell, 2019; Scherer, 2015;). Instead, proposed regulations should be specifically tailored to the types of AI systems available in the market, including any foreseeable developments in the near future (Castel & Castel, 2016).

iv. *Legal Education*

Campbell (2016) said that legal education is unfortunately 10 years behind in keeping up with technological advancements, unlike their counterparts in the medical and finance fields. It is imperative with rising transformation that law institutions embrace a more proactive mindset in preparing future lawyers for a digital market. However, this does not indicate that legal and analytical reasoning are considered redundant skills, instead, technological skills are equally important in order to survive in a digital society (Carrel, 2018). Law graduates equipped with technological skills are considered far more employable in the future (Susskind, 2017).

Understandably, Malaysia would be able to make a formidable presence in the legal technology scene if cumulative efforts are taken to promote and improve awareness of AI technology in the legal industry. As the former Chief Justice Tan Sri Richard Malanjum said “...*the legal profession must embrace technology. There is no option. It is coming soon to the legal profession. Adapt or be dropped*” (Damanhuri, 2019). Lawyers either embrace innovation or be left behind in this digital age (Foong, 2019; Kuek, 2020). In light of this, law institutions should equally adapt and revise the existing curriculum to reflect the changing phase that is taking place. To draw an analogy from the medical profession, future medical professionals are taught of existing technology relevant to their field in their curriculum. This serves as an added advantage because even in the medical field, computer machines are doing much more than predicting diagnosis for treatments (Susskind & Susskind, 2015).

A viable recommendation would be to introduce a module on technology as a supplementary subject to existing core subjects. Clinical training would also facilitate opportunities

for law students to collaborate with other disciplines. This would enable greater exposure to the types of software and technology available in the market. Future lawyers should be equally equipped in technological skills and not just merely in academic legal knowledge in order to perform effectively in a digital environment (Susskind & Susskind 2015). Hence, an innovative and improved method of teaching should be prioritized, where the emphasis is not merely placed on using technology to teach law but to also expose law students to types of legal software available in the market and how these systems may enhance legal work. This skill would serve as an added advantage for law graduates once they enter the legal workforce.

CONCLUSION

The basis that emerging technologies such as AI may disrupt the legal fraternity is fairly established (Armour et al., 2020). The growth of the legal tech scene in Malaysia will not plateau (Damanhuri, 2019). However, there are pertinent questions on how AI systems will do so and to what extent disruption will take place. It is inevitable that as Machine Learning and Natural Language Processing continue to advance with greater sophistication, it would be easier for AI to accomplish complex tasks in legal practice (Dale, 2019; Susskind, 2017). The legal fraternity should rightfully embrace the disruption that is transforming the practice of law. The 21st century legal professional is one who is well-versed not purely in legal aspects but equally equipped with technological skills (Susskind, 2017). In the past, the legal fraternity had the time to carefully consider the adoption of AI, however, this is not the case currently as technological innovations continue to advance and impact many industries globally, to which the legal industry is no exception (Simon et al., 2018). It is pivotal that legal professionals develop skillsets that AI cannot do in order to stay relevant and competitive in the digital era. It is acknowledged that AI systems are not the all-encompassing solution for legal disputes as they may be flawed and biased (Alarie et al., 2018). However, the future of the legal fraternity is strongly linked with technology (Simon et al., 2018). Legal professionals should train themselves to leverage on AI in legal work to further enhance and advance efficiency in legal services (Susskind, 2017).

The article attempts to highlight the current implications of AI in the legal fraternity and the possible recommendations which may be implemented to enable greater integration of emerging innovations such as AI in the legal fraternity in Malaysia. Although it would not be possible to provide a complete blueprint to safeguard and mitigate against all threats or risks arising from AI, it is nevertheless important to embrace technological innovations such as AI to advance efficiency and productivity in legal services.

The COVID-19 pandemic has served as a catalyst, an awakening as there has been swifter technology integration in the past 12 months in comparison to the last decade (Susskind, 2019). The pandemic has also necessitated the implementation of online hearings and the adoption of technological platforms such as Microsoft Teams and Cisco to ensure compliance with health recommendations (Legg & Bell, 2019). It is predicted that the legal fraternity will continue to utilize these tools to improve efficiency in the execution of justice in the post pandemic (Susskind, 2019). There may also be greater acceptance of technological tools such as AI in the legal fraternity (Legg & Bell, 2019). Further, it is crucial that the legal fraternity evolve in tandem with the rapid development of technology in order to stay relevant and competitive in a digitalized world. As Susskind (2017) rightfully propounds, the legal fraternity must future-proof their legal services in order to remain relevant in a digital era which includes embracing technology as a means towards advancing greater efficiency and accessibility in legal services for clients. Legal professionals should also improve their talents and skills to accommodate the diversity of continuous advancements in the technology scene. However, the process will not be an easy task as it requires careful consideration from all relevant stakeholders including the lawyers themselves, law firms, law schools, Bar associations, governing bodies and judges to shape the future lawyer. Although the legal fraternity in Malaysia has seen little innovation in the past, it is at the cusp of the launch of a legal revolution and should embrace AI technology towards enhancing the quality of legal services. Ideally, the legal fraternity should avoid relying on antiquated practices of law and wield the benefits of emerging innovations such as AI. Finally, it can be concluded that this article encourages policymakers and relevant practitioners to develop practical measures to encourage better integration of AI in the legal fraternity.

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