https://doi.org/10.69974/glslawjournal.v1i1.3

AI: Artificial Intelligence or Accidentally Intrusive

Nivedita Gajjar,
Legal Counsel with Tech Mahindra &
Ravi Thakur
Founding and Managing Partner,
Sense Legal LLP

Abstract

Drawn out from the science fiction movies decades ago, Artificial Intelligence ("AI") in the last few years has become our reality. While this technology is constantly and rapidly progressing, we need to evaluate whether our existing legal system is equipped to deal with this new facet. This paper aims to look at AI's potential to impact our daily lives and assess how existing legal framework attempts to deal with the encounter of the thinning line between "real" and "artificial". The Paper discusses some of the recent incidents making AI the subject matter of concern and dispute, and how certain jurisdictions attempt to ascertain liability in such matters. Through this paper we aim to highlight the challenges that use of AI brings to the legal fraternity.

What or Who is an AI?

Understanding Artificial Intelligence and its uses

According to Britannica, AI is the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings. The term is frequently applied to the project of developing systems endowed with the intellectual processes characteristic of humans, such as the ability to reason, discover meaning, generalize, or learn from past experience.[2] As per Merriam Webster, Artificial Intelligence is (i) a branch of computer science dealing with the simulation of intelligent behaviour in computers; (ii) the capability of a machine to imitate intelligent human behaviour.3 In other words, AI is construed as computers with the capability of learning, understanding, processing information and analysing it,

2 B.J. Copeland, Artificial Intelligence, Encyclopaedia Britannica (May 9, 2019) https://www.britannica.com/technology/artificial-intelligence
3 Artificial Intelligence, Merriam-Webster.com (2019), https://www.merriam-webster.com/dictionary/artificial%20intelligence (Last visited June 30, 2019)

similar to humans. While this paper does not intend to dwell into the technicalities it is important to understand that AI is based on algorithms and models, and machine learning is a component of AI whereby, the machine is capable of learning and providing outputs based on the data received by it. AI is often classified into two fundamental groups – applied and general. Applied AI is more common in the real world, for example, applied AI include systems designed to intelligently trade stocks and shares or manoeuvring an autonomous vehicle. Generalized AIs are systems or devices that fall in the area that has led to the development of machine learning.[4] Artificial General Intelligence ("**AGI**") is an emerging field aimed at building of 'thinking machines'; that is, general-purpose systems with intelligence comparable to that of the human mind. This unconfined form of AI is intended to demonstrate understanding and reasoning skills with a breadth and depth of knowledge that allows it to easily traverse between vastly unrelated topics and use cases[5], just as a human can.[6]

While many feels that AI use in everyday lives is very recent, it is noteworthy to highlight some of the existing and upcoming AI uses. Device assistants like Siri, Alexa, Cortana, Google Now which operate through voice commands are examples of AI. Google Maps and Uber, including UberEats uses AI to ascertain time to destinations by collecting and analysing user data. Commercial flights include AI auto- pilots. Facebook uses DeepText to detect intent of the user—for instance, by allowing a user to hail an Uber from within the Facebook messenger app when such user types a message stating "I need a ride" but not when a user types, "I like to ride on horses." DeepText is also

[4] Bernard Marr, *What is the difference between Artificial Intelligence and Machine Learning?*, Forbes (Dec. 6, 2016), https://www.forbes.com/sites/bernardmarr/2016/12/06/what-is-the-difference- between-artificial-intelligence-and-machine-learning/#5e7841962742

[5] Use case is terminology used in software and system engineering. It is a methodology used for system analysis to identify, clarify, and organize system requirements. The use case is made up of a set of possible sequences of interactions between systems and users in a particular environment and related to a particular goal to be achieved from the software system.

[6] Invacio AAP Holdings|INV, *Applied vs. Generalized AI|Where do we fit, and what is the difference*, INV News Blog (Sept. 15, 2018), https://www.invnews.blog/applied-vs- generalized-ai-where-do-we-fit-and-what-is-the-difference

used for automating the removal of spam, helping popular public figures sort through the millions of comments on their posts to see those most relevant, identify for-sale posts automatically and extract relevant information, and identify and surface content in which one might be interested.[7] There are many more examples across the industries like banking, stock market, healthcare and automobiles where AI technology is used for better availability of products, services and related solutions for people.

Simply put, AI has become a part and parcel of our lives and continues to grow as technology experts work towards perfecting the technology for our use.

Though the benefits of AI are undeniable, we need to prepare for the cons too, including where machines and robots are taking over jobs. In the legal industry, the use of AI driven software is extensive given the nature of work which involves reading, indexing, analysing and identifying important sections of information from voluminous amount of papers, records, emails and such other documentation. According to Forbes[8], most of the jobs of paralegals and legal research positions may be eliminated within the next decade. As reliance grows on software such as COIN, ThoughtRiver, KIRA Systems[9], Watson[10], most task requiring laborious repeated work may be eliminated from a counsel's daily task lists.

AI is an area of science and technology that aims to develop intelligent machines which work and act like humans. In the following sections of the paper, we discuss how our existing socio-legal norms are accommodating and assessing our new 'human-like' assistants.

---

[7] Gautam Narula, *Everyday examples of Artificial Intelligence and Machine Learning*, Emerj.com, https://emerj.com/ai-sector-overviews/everyday-examples-of-ai/ (Last updated on May 17, 2019)

[8] Alex Heshmaty, *Artificial Intelligence in law in perspective*, Infolaw Newsletter (Nov., 2017), https://www.infolaw.co.uk/newsletter/2017/11/artificial-intelligence-law-perspective/

[9] Edgar Alan Rayo, *AI in Law and Legal Practice – A comprehensive view of 35 current applications*, Emerj.com, https://emerj.com/ai-sector-overviews/ai-in-law-legal-practice-current- applications/ (Last updated on May 20, 2019)

[10] Ron Friedmann, *Meet your new lawyer, IBM Watson*, Prism Legal Blog Post, https://prismlegal.com/meet-new-lawyer-ibm-watson/ (Last visited on June 30, 2019)

Accidents and Intrusions!

AI gone wrong

Every coin has two sides and while there are many benefits to be reaped from AI, there certainly are emerging challenges and issues that require immediate attention to avoid disastrous consequences. In this section we highlight some of the instances where AI technology has gone awry.

In 2017, a robot named Sophia was granted citizenship in Saudi Arabia, opening a Pandora's box of legal issues concerning its rights. Even though many suggest that granting citizenship to Sophia was a mere public relation stunt, a class of people argued that by doing so, the robot was granted more rights than a woman in Saudi Arabia[11], which gives rise to the question that if an AI is considered as 'human' under a law then can an AI also be sued, own property, vote etc.?[12] According to Article 25 of the International Covenant on Civil and Political Rights[13] ("Covenant"), every citizen has the right and the opportunity to take part in the conduct of public affairs, to vote and be elected and to have access, on general terms of equality, to public service in his country.[14] Many have argued that the Covenant's treatment of citizenship suggests that, in general, a citizen is assumed to be a person and therefore being a citizen in one place could mean being a legal person everywhere, thereby having all the rights of such legal person.[15] However, Saudi Arabia has not signed the Covenant, leaving the question in respect to the rights of Sophia open-ended, in relation to international law.

Not only Saudi Arabia, but Japan has also granted residence to an AI chat-bot, Shibuya Mirai. It is pertinent to note that just months before Sophia and Shibuya Mirai were granted citizenship and residency, neuroscientists have claimed that AI could one day become conscious.

[11] Roman Yampolskiy, *Could an artificial intelligence be considered a person under law?*, Phys.org (Oct. 5, 2018), https://phys.org/news/2018-10-artificial-intelligence-person-law.html

[12] *Id.*

[13] International Covenant on Civil and Political Rights, 2200A (XXI), § 25 (1966) available at https://www.ohchr.org/en/professionalinterest/pages/ccpr.aspx

[14] *Id.*

[15] John Frank Weaver, *What exactly does it mean to give robot citizenship?*, Slate.com (Nov. 6, 2017), https://slate.com/technology/2017/11/what-rights-does-a-robot-get- with-citizenship.html

Interestingly, various cognitive scientists have posited that consciousness is "resolutely computational" and could therefore be coded into algorithms.[16] Therefore, as consciousness is a fundamental characteristic of humans, if AI, which is based on algorithms, becomes self-aware and can experience emotions, then the concept of human rights is needed to be extended to such AI.[17]

In terms of accountability, the laws with respect to AI are more uncertain than the rights granted to it under various jurisdictions around the world. One of the issues which a legislator might face while legislating with respect to AI's accountability would be to ascertain who should be made accountable for an AI's unlawful act or omission?

the developer of the AI or the person(s) who had given or fed the AI an unlawful command or data, or the AI itself. For example, Amazon, an e-commerce company, developed a recruiting tool which used artificial intelligence to rate job candidates ranging from one star to five stars. However, the Company had to stop using the said tool as it was found that the AI was discriminating against women applicants as the AI was trained to vet applicants by observing the patterns in resumes submitted to the Company over a ten year period, most of which came from men which was a reflection of male dominant society. The AI found a distinction in the way male applicants described themselves through the masculine language and penalized resumes that included words like "women's" (such as "women's chess club captain").[18] Though the Amazon case never reached the court of law, it becomes a perfect case study which shows that any action of an AI is somewhere or the other a result of human intervention – in this case, it was trained by its developer to observe discriminatory patterns in resumes submitted over a period of ten years.

[16] Anthony Cuthbertson, *Tokyo: Artificial Intelligence 'Boy' Shibuya Mirai becomes world's first AI bot to be granted residency*, Newsweek.com (Nov. 6, 2017), https://www.newsweek.com/tokyo-residency-artificial-intelligence-boy-shibuya-mirai- 702382

[17] *Id.*

[18] Jeffrey Dastin, *Insight – Amazon scraps secret AI recruiting too that showd bias against women*, Reuters (Oct. 10, 2018), https://in.reuters.com/article/amazon-com-jobs-automation/insight-amazon-scraps-secret-ai-recruiting-tool-that-showed-bias-against- women-idINKCN1MK0AH

Another case of AI going wrong was in March 2018, when Elaine Herzberg, a pedestrian was killed following a collision with an Uber's self-driving test car. The car was operating in autonomous mode with a human safety back up driver, who was supposed to hover her hands on the steering wheel of the car so that if the car's AI fails to avoid any collision, she could take control of the car and avoid any untoward incident. However, just before the fatal collision, the safety back up driver was looking down on her phone and failed to take over the controls of the car on time. Many of the experts argue that the sensors and software of the car were supposed to avoid the collision without the safety back up driver's intervention but failed to do the same as they were defective.[19] Michael Ramsey, an expert on self-driving cars, said that there was a complete failure of the system to recognize an obviously seen person.[20] However, on March 4, 2019, the prosecutor in the said case released an official statement stating that it has determined that there was no basis for criminal liability for Uber Corporation (i.e., the entity which has ownership rights of the self-driving car), though, the prosecutor office is yet to determine whether the safety back up driver should be charged with a crime or not.[21] In a similar case, a Tesla car rammed into a highway barrier which, at the time of crash was operated on autopilot mode.[22] The lawsuit alleged that the AI, i.e., the autopilot mode, misread the lane lines and failed to detect the concrete media, failed to brake and instead accelerated into the median.[23] As on July, 2019, the said lawsuit is still to attain finality however, the attorney who represented the deceased family stated that the said lawsuit aims to ensure the technology behind semi-autonomous cars is

[19] Carolyn Said, *Video shows Uber robot car in fatal accident did not try to avoid woman*, Sfgate.com (March 21, 2018), https://www.sfgate.com/business/article/Uber-video-shows-robot- car-in-fatal-accident-did-12771938.php

[20] *Id*.

[21] Sean Hollister, *Uber won't be charged with fatal self-driving crash, said prosecutor*, The Verge (Mar. 5, 2019), https://www.theverge.com/2019/3/5/18252423/uber-wont-be- charged-with-fatal-self-driving-crash-says-prosecutor

[22] *Sz Hua Huang et al v. Tesla Inc., The State of California*, no. 19CV346663 (Cal. Super.)

[23] Kristen Korosec, *Tesla sued in wrongful death lawsuit that alleges Autopilot caused death*, Techcrunch.com, https://techcrunch.com/2019/05/01/tesla-sued-in-wrongful-death- lawsuit-that-alleges-autopilot-caused-crash/ (Last visited on June 30, 2019)

safe before it is released on the roads, and status of the AI, in terms of its safety and accuracy is not withheld or misrepresented to the public.[24]

As aforementioned, AI also learns from the data that has been fed to it, which makes the assumption of accountability more difficult since the user(s) of the said AI who usually feed the data can be numerous. For instance, it took less than [24] hours for Twitter to corrupt an innocent AI chat-bot named Tay. Microsoft unveiled Tay, a Twitter bot that the company described as an experiment in "conversational understanding." The more you chat with Tay, said Microsoft, the smarter it gets, learning to engage people through "casual and playful conversation." Unfortunately, the conversations didn't stay playful for long. Pretty soon after Tay launched, people started tweeting the bot with all sorts of misogynistic, racist, and Donald Trump-ist remarks. Tay being essentially a robot-parrot with an internet connection started repeating these sentiments back to users, proving correct that old programming adage: flaming garbage pile in, flaming garbage pile out.[25]

One of the main questions which is faced by lawmakers across the globe is whether AI can be held accountable for its action in the same way as humans? In order to ascertain whether AI technology be treated at par with humans, whenever any of its action or omission breaches any aspect of law, one needs to know the status of AI in the society and how it has been ascertained under various jurisdiction.

In the present time, unlike humans, any known AI is not sentient or self- aware to make a decision on its own. All the actions or omissions of an AI is dependent not only on the algorithm developed by the developer but also on what the AI learns through the data fed to it by the humans. In any of the above cases, human intervention cannot be overlooked, making it obvious that an AI cannot be held accountable solely for its unlawful action or omission.

---

[24] *Id*.

[25] James Vincent, *Twitter taught Microsoft's Ai Chatbot to be racist asshole in less than a day*, The Verge (Mar. 24, 2019), https://www.theverge.com/2016/3/24/11297050/tay- microsoft-chatbot-racist

Making AI liable

Approach towards disputes concerning AI

The Three Laws of Robotics, a set of rules devised by the science fiction author Isaac Asimov in his short story "Runaround" have impacted the thought on ethics of AI. The three laws being –

First Law: A robot may not injure a human being, or through inaction, allow a human being to come harm.

Second Law: A robot must obey the orders given by a human being except where such order would conflict with the First Law.

Third Law: A robot must protect its own existence as long as such protection does not conflict with the First and Second Laws.[26]

However, these laws are no longer useful for legislating rules for regulating AI as there are AIs in form of drones and other robots which are used in military with the sole object to harm humans and to gain tactical advantage in a combat situation. Also, as discussed above, AI has performed certain actions or omissions which have resulted in violation of laws. Therefore, it is pertinent for every country to legislate regulations to regulate and control AI and its actions. Some countries have already come up with some guidelines for enacting legislations which does the same and is discussed in the later sections of the paper.

Presently, the legal systems around the world in interaction with AI, find either the developer or the owner liable for the unlawful actions or omissions of an AI. In addition to it, one of the courts in United States of America has developed the "component part doctrine" while deciding the case of Jones v. W + M Automation Inc.[27]. In Jones case[28] a robotic gantry loading system struck the plaintiff when he entered into an area behind the safety fence and the Court held that manufacturer of the robot was not liable because the owner, General Motors, who bought the robot installed the robot without an interlock system, which would have stopped the machine when people were present within the danger zone i.e. behind the safety fence while the system was operating.

[26] Asimov, Isaac, *"Runaround". I, Robot (The Isaac Asimov Collection ed.)*, p.40 (1950).
[27] Jones v. W + M Automation, Inc., 818 N.Y.S.2d 396 (App. Div. 2006)
28 Id.

The court did not find the manufacturer liable under the component part doctrine, according to which a manufacturer of a non-defective component part of a product would not be liable if its part is incorporated into another product that might be defective.[29] So, if the analytical capability of an AI is provided by any other person than the manufacturer then the manufacturer may not be liable for any harm caused by such AI.[30] In United Kingdom, an AI committee in the House of Lords has been formed to frame policies and provide recommendations for regulating the AI, which has been discussed in details in subsequent sections of this paper. The countries forming the European Union have also come up with the German Traffic Act which imposes the responsibility for managing an automated or semi- automated vehicle on the owner.[31] However with advancement in AI technology, regulating AI still remains a grey area as cases filed across state-jurisdictions in the United States of America, involving entities using AI extensively in their technology such as General Motors, Uber and Tesla, have been settled between the company and the victim or their family, without adjudicating on the accountability for such actions of AI.

Smarter laws for smarter machines?

Guidelines and policies for drafting AI related laws

It is evident from the foregoing section that there are numerous instances where AI driven products and solutions can have catastrophic results. Just as the European Union formulated the General Data Protection Regulation in the foresight of the protecting the personal and sensitive information of individuals in the era of technology, there are ongoing talks and efforts towards regulating human and AI interaction and use. From a broader perspective the legislations and regulations are aimed towards how AI will be utilized, areas and sectors where AI can be used and to what extent, preserving human rights, preventing

[29] Woodrow Barfield, *Liability for autonomous and artificially intelligent robots*, Paladyn, Journal of Behavioral Robotics, Vol. IX, 2018 at 193.
[30] *Id*.
[31] Atabekov & O. Yastrebov, *Legal Status of Artificial Intelligence Across Countries: Legislation on the Move*, European Research Studies Journal, Vol. XXI, Issue 4, 2018 at 773.

unauthorized use / disclosure of data and most importantly ascertaining safety of the AI products used in commercial and public spaces and pinning liability in the event of a dispute raising civil or criminal liability.

Elon Musk, (founder of Tesla), tweeted that: "We need to be super careful with AI. Potentially more dangerous than nukes." He added: "I'm increasingly inclined to think there should be some regulatory oversight [of AI], maybe at the national and international level." Further, attorney and legal scholar, Matthew Scherer has called for promulgation of an Artificial Intelligence Development Act and creation of a government agency to certify AI programs' safety.[32] As recently as 8th April, 2019, EU's high level expert group on AI has published Ethics Guidelines for Trustworthy AI.[33] ("AI Ethics Guidelines") According to the AI Ethics Guidelines, an AI should be lawful, ethical and robust, both technically and socially. The AI Ethics Guidelines focus majorly on the AI to be ethical and robust, however, the aspect of lawfulness is not addressed in detail. The AI Ethics Guidelines assume that all legal rights and obligations [in the EU] that apply to the processes and activities involved in developing, deploying and using AI systems remain mandatory and must be duly observed.[34] The AI Ethics Guidelines comprehensively lists key areas where AI's usage may pose a risk to people and correspondingly how the future legislations and policies should be framed to deal with such foreseeable mishaps. For instance, the AI Ethics Guidelines lay down norms that AI is developed in a manner that respects, serves and protects humans' physical and mental integrity, personal and cultural sense of identity; and therefore, requires mitigation of AI causing indirect or direct illegitimate coercion, AI conducting unjustified surveillance; AI systems undermining democratic processes or democratic voting

32 Steve Lohr, A.I. and Privacy concerns get White House to embrace global cooperation, The New York Times (Apr. 3, 2019), https://www.nytimes.com/2019/04/03/technology/artificial-intelligence-privacy- oecd.html

33 High Level Expert Group, Ethics guidelines for trustworthy AI, European Commission Report (Apr. 8, 2019) available at https://ec.europa.eu/digital-single-market/en/news/ethics-guidelines-trustworthy-ai

34 Id., p.8

system. Additionally, AI systems should maintain adequate respect for potentially vulnerable persons and groups, such as workers, women, persons with disabilities, ethnic minorities, children, consumers to avoid any nature of bias.35 The AI Ethics Guidelines highlight critical aspect of tension between the ethical principles and imperatives. In various application domains, the principle of prevention of harm and the principle of human autonomy may be in conflict. Consider as an example, the use of AI systems for 'predictive policing', which may help to reduce crime, but in ways that entail surveillance activities that impinge on individual liberty and privacy. Furthermore, AI systems' overall benefits should substantially exceed the foreseeable individual risks. While the above principles certainly offer guidance towards solutions, they remain abstract ethical prescriptions. Hence, AI practitioners cannot be expected to find the right solution based on the principles above, yet they should approach ethical dilemmas and trade- offs via reasoned, evidence-based reflection rather than intuition or random discretion.36 These AI Ethics Guidelines identify the stakeholders such as developers, researchers who design and develop the AI systems – essentially those who need to keep in mind the listed principles while creating and implementing the AI. The end users are the key stakeholders as well, since their rights require safeguarding in light of the principles listed in the AI Ethics Guidelines. Although the desired aim is to have AI systems operate independently, the AI Ethics Guidelines lay emphasis on having some form of human control and intervention in the operation and use of the AI to monitor its operations and resultant outputs. The AI Ethics Guidelines further deliberate on the security of the AI systems to prevent the data poisoning or [37]model leakage[38] which may lead to adversarial system behaviour. It is important to consider the potential abuse of the developed AI system and to secure it against any form of attacks and hacking. The AI Ethics

[35] *Supra* per 33, p. 11-13
[36] *Id.*, p. 15 cl. 2.3
[37] Model Leakage -when information from outside the training dataset is used to create the model. This additional information can allow the model to learn or know something that it otherwise would not know and in turn invalidate the estimated performance of the model being constructed. (Data Leakage in Machine Learning https://machinelearningmastery.com/data-leakage-machine-learning/)
[38] *Supra* per 33, p. 18

Guidelines seek to establish transparency in the use of AI systems. This would include tracing i.e. how the AI systems collects and applies data, providing explanation on how AI has ascertained the output or concluded to a decision and right of humans to know that they are interacting with AI system to establish the level of accuracy and the limitations that are allied with AI.[39]

On 22 May 2019, 36 member countries of the Organisation for Economic Co-operation and Development (OECD), signed up to the OECD Principles on Artificial Intelligence at OECD's annual Ministerial Council Meeting in Paris ("Principles") and focused on the topic of "Harnessing the Digital Transition for Sustainable Development".[40] Two key elements were highlighted which owe responsibility towards making AI secure and safe – namely AI actors and stakeholders. As per the Principles, AI actors are those who play an active role in the AI system lifecycle, including organisations and individuals that deploy or operate AI. Additionally, the Principles define stakeholders as those which encompass all organisations and individuals involved in, or affected by, AI systems, directly or indirectly. AI actors are a subset of stakeholders.[41] These principles ensue from AI Ethics Guidelines and also emphasize on the sustainable development, well-being, human centred values and fairness, transparency, accountability, security, safety. A key distinguishing factor is that according to the Principles, the governments need to play an active role in encouraging investments, research, environment of policy making and foster information and knowledge sharing on AI technology. OECD Committee on Digital Economy Policy (CDEP) developed Council Recommendation ("Recommendation") which focuses on policy issues that are specific to AI and strives to set a standard that is implementable and flexible enough for this rapidly evolving field. The Recommendation contains five high-level values- based principles and five recommendations for national policies and

[39] *Supra* per 33, p 20

[40] *Forty-two countries adopt new OECD principles on Artificial Intelligence*, OECD (May 22, 2019), https://www.oecd.org/science/forty-two-countries-adopt-new-oecd-principles-on- artificial-intelligence.htm

[41] *Recommendation of the Council on Artificial Intelligence*, OECD (May 22, 2019) https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0449

international co-operation.[42] While there will be positive covenants to regulate AI, countries should also be required to focus on devising laws to restrict use of AI in certain sectors, for instance weapons, nuclear technology, etc. While weapons with the first level of autonomy, or "human-in-the-loop systems[43]," are in use today e.g. Israel's Iron Dome. The next level of weapons, "human-on-the-loop systems [44]," may select targets and deploy force without human assistance. South Korea has placed a sentry robot along the demilitarized zone abutting North Korea whose capabilities align with this level of autonomy. Finally, there is the level of fully autonomous weapons that operate entirely independent of human input.[45] However, it may be required to prohibit deployment of such autonomous weaponry as the chances of its misuse are more probable and may result in situations where the weapon is hacked and misused by an unrelated third party entity. In the United Kingdom, a House of Lords Artificial Intelligence Select Committee was appointed which prepared a Report on AI in the UK: Ready, Willing and Able? This was submitted to the UK government and the response[46] to the Report provides an overview of how UK envisages to tackle legal challenges foreseen by default or acts of AI. Under the chapter of mitigating the risks of artificial intelligence legal liability of the Report, the Committee states that it is possible to foresee a scenario where AI systems may malfunction, underperform or otherwise make erroneous decisions which cause harm. In particular, this might happen when an algorithm learns and evolves of its own accord. It is not clear whether new mechanisms for legal liability and redress in such situations are required, or whether existing mechanisms are sufficient. Committee recommended that the law commission

---

[42] *Supra* per 41

[43] Human in the loop requires human command over the AI's choice of target and deployment of force. Therefore, the AI cannot operate unless instructed specifically by human command.

[44] Human on the loop allows the AI to operate autonomously, however, a human can override the AI's decisions

[45] Amitai Etziono & Oren Etzioni, *Should Artificial Intelligence be regulated?*, Issues in Science and Technology, Vol XXXIII No. 4, 2017, https://issues.org/perspective-should- artificial-intelligence-be-regulated/ (Last visited on June 30, 2019)

[46] *Government response to Artificial Intelligence Select Committee's Report on Ai in the UK: Ready Willing and Able?*, Government of UK (June 2018), https://www.parliament.uk/documents/lords-committees/Artificial-Intelligence/AI-Government-Response2.pdf

consider the adequacy of existing legislation to address the legal liability issues of AI and, where appropriate, recommend to the government appropriate remedies to ensure that the law is clear in this area. At the very least, this work should establish clear principles for accountability and intelligibility. The UK government has acknowledged the potential errors produced through artificial intelligence technologies and their potential implications. The UK government also emphasizes on the requirement of protecting the persons who are subject to a decision by the AI. In particular, if a decision, which is based solely on automated processing, is required by law, the law should specify safeguards that controllers should apply to ensure impact on the individual is minimised. This includes informing the data subject that a decision has been taken and provides them with 21 days to ask the controller to reconsider the decision or retake the decision with human intervention.[47] Informing the public of how and when AI is being used to make decisions about them, and what implications this will have for them personally will be raised with the new Artificial Intelligence Council. UK government further states that artificial intelligence technologies should serve people, businesses, and sectors beneficially and, where any outcomes resulting from errors are detrimental to these groups, remedial action should be undertaken. The Office for Artificial Intelligence, Centre for Data Ethics and Innovation[48], and the AI Council[49] have taken the concerns into consideration and engaged the law commission for further course of action.[50] Members of the Victorian Parliament have established an All- Party Group on Artificial Intelligence (AI) to learn more about this technology and the impacts it will have on Victorians in the future.[51]

[47] *Supra* per 46, p.7, art. 12

[48] The Centre for Data Ethics and Innovation (CDEI) is an advisory body set up by UK Government and led by an independent board of expert members to investigate and advise on how we maximise the benefits of data-enabled technologies, including artificial intelligence (AI).

[49] AI Council is an independent expert committee which has been created to help drive growth in the artificial intelligence (AI) sector in the UK.

[50] *Supra* per 46, p. 31

[51] *Artificial Intelligence Primer*, Victorian All-Party Parliamentary Group on Artificial Intelligence (March 2018), https://www.parliament.vic.gov.au/publications/research-papers/download/36-research-papers/13863-artificial-intelligence-primer

Much earlier than its counterparts, Japan has on 28 July, 2017 published Draft AI R&D Guidelines for International Discussions in preparation for the Conference toward AI Network Society.[52] ("**Japanese Guidelines**") Upon reading a tentative translation of the Japanese Guidelines, one can ascertain that Japanese also intend to secure balance between the risk and benefits of AI. Japanese Guidelines aim to develop an environment where humans can benefit from life in harmony with AI networks and share the guidelines and best practices among international stakeholders.[53] The Japanese Guidelines also emphasize on the principles of transparency, accountability, security and collaboration between stakeholders with respect to AI.[54]

In contrast, the Summary of the 2018 White House Summit on Artificial Intelligence for the American Industry ("**Summit**") aims to remove regulatory barriers to the deployment of AI-powered technologies. The Summit laid down the principles for use of AI for military advantage, national security, government agencies, and predicting regulatory compliances such as taxation.[55] To quote from the Summit "We didn't regulate flight before the Wright Brothers took off at Kitty Hawk"; "Today, drones are delivering life-saving medicines in Africa. But because of overbearing regulations in America, what saves lives in Rwanda is banned in Raleigh".[56] The approach of the United States of America appears to be in stark difference than other jurisdictions towards preparing for legislations to regulate the use of AI.

Though there are no conclusive and binding legislations which are dedicated to regulating, governing and holding the AI liable, most jurisdictions have taken pro-active approach in assessing the potential and foreseeable risks associated with use of AI. While the United States

---

[52] *AI Policy – Japan*, Future of Life Institute, https://futureoflife.org/ai-policy-japan/ (Last visited on June 30, 2019)

[53] *Draft AI R&D Guidelines for International Discussion*, The Conference toward AI Network Society (July 28, 2017), http://www.soumu.go.jp/main_content/000507517.pdf

[54] *Id.*, p 8

[55] *Summary of the 2018 White house Summit on Artificial Intelligence for American Industry*, The White House Office of Science and Technology Policy (May 10, 2018), https://www.whitehouse.gov/wp-content/uploads/2018/05/Summary-Report-of-White-House-AI-Summit.pdf

[56] *Id.* pp.8-9

of America appear to have an aggressive policy towards achieving the best form of AI technology, other geographies have adopted a more thought based approach wherein they seek to have a balance and control on how AI systems should be used and implemented to avoid any possible harm to humans and our existing social fabric. In Japan, AI systems may be adjudicated under the laws for product liability. However, EU has a slightly different take and aims to reform the directives for product liability[57] when it relates to AI since AI is a machine learning algorithm that can learn and 'think' on its own. At present the understanding is that authorities are to ensure people can seek redress and product liability regimes have channelled responsibility towards the producer/manufacturers and its insurers.[58]

[57] The Product Liability Directive 85/374/EEC is a directive of the Council of the European Union that created a regime of strict liability for defective products.

[58] Andrew Austin, Product Liability in AI Age, Freshfields Brauckhaus Deringer, https://www.freshfields.com/en-gb/our-thinking/campaigns/digital/ a rtificial-intelligence/product-liability-in-the-ai-age/(Lastvisited onJune30,2019)

Patel, Sandip S. and Bhatt, Atul, "The Application of Web 2.0 Tools in University Libraries of India" (2019). Library Philosophy and Practice (e-journal). 2984. https:// digitalcommons.unl.edu/libphilprac/2984

Conclusion

AI is like a child who learns from interaction with people or from the data that is made available to it. In fields such as ticket booking, travel and accommodation reservations, conducting due diligence, sanctioning of loans and passing insurance claims, court trials, job applications, there are numerous individuals or data sources from whom the particular AI would interact and gather information. AI will provide results based on the information that it has been fed and dwell upon the information received, providing an output which could be a combination of information and data received or its own analytical outcome of the same. In such circumstances, it becomes impossible to ascertain whether the developer created an incorrect algorithm or whether one or more of the person(s) are responsible for providing incorrect information to AI which resulted in a negative output.

Presently, even though the AI is not able to take a conscious decision independent of human intervention, the laws in various jurisdiction around the world are silent to ascertain liability if an unlawful act or omission is done by an AI. The legislators will be required to make new laws and regulations which specifically address the issue of pinning the liability in such an event either on the developer, who created the AI or the person(s) who fed it with information which resulted in such an unlawful act by the AI. The challenging part here would be to pin point the liability on a person if such an act is done by an AI due to wrong information fed to it by multiple users. Therefore, just like a car or gun which requires a license to be used, AI maybe given a license so that the liability for any unlawful act done by such AI can be traced back to its license holder who then should be given a fair opportunity to explain why he/she should not be made liable for the acts of the AI. It is pertinent that, to trace and establish liability the AI system should be made transparent so that some form of audit trail can be verified enabling adjudicating authorities to identify the event/causation that led AI to commit a breach. However, it still remains an open question that in the eventuality the liability is solely attributable to AI, how would the judiciary penalize the AI? Our existing laws do not make machines, computer systems or software directly liable for violation of law. Would

there always be a requirement of some level of human intervention requirements in AI system and its functioning and monitoring?

The plethora of societal aspects that we may need to relook at in the light of AI systems being utilized in particular sector is thought provoking –whether it be any form of discrimination, erroneous or wrong booking, confidentiality breach, privacy issues and vulnerability of AI systems towards hacking among many others. On one hand we have jurisdictions who have given AI a human like status; USA which firmly believes that regulating AI will restrict its growth, while on the other hand jurisdictions like UK and EU are looking to ascertain risks that AI poses and attempting to formulate legislations and policies around the foreseeable concerns. At present it is a challenge to have any set of international standards and norms which would apply globally to AI development, implementation and disputes arising from usage of AI. While AI would be required to pass the tests of safety, accuracy, reliability, preservation of privacy, quality and integrity of data, non- discrimination, and such other aspects, it would eventually translate to creating a machine which understands and acts like human beings but has no or negligible human flaws, and is regulated by human framed laws and regulations for benefit of humans. Though we have made an attempt in this paper to cover certain major aspects relating to AI and its potential impact on existing legal framework, only time and materializing of ongoing efforts may provide us some clarity on how legislators, judiciary and subject matter experts deal with growing advent of AI in our lives and the glaring questions it brings with it.

In house committee review

- Insignificant grammatical errors have been corrected.
- Research paper has been justified and edited in accordance with the prescribed guidelines.