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Parenting AI – Legal Implications

Karthik Shankar

Humans since ages, have strived to achieve a world of convenience albeit the invention of wheel, to electricity, the kindling of a flame or the development of the technology of an smart phone that detects your location and is connected to your bank account, and machines in general, people have always attempted to create an innovation, that stands at par with the working of a normal human brain. Humans have always sought to delegate responsibility to facilitate ease in in their daily lives.

However, in the event to create convenience, we have now outdone ourselves and hence, there is a consistent endeavor to build a substitute to a human brain and the understanding that it holds. People are viewed as the best creation. And to create and sustain masterpiece unnaturally, is called the development of an artificial intelligence.

Thus, the rise of artificial intelligence, or synonymously knows as the AI, is rapid, which is further fuelled by the steady need to develop a technology that is as smart and as efficient as a human. The purpose is to reduce the burden of mankind and to give an apt and a cost-effective assistance. A machine or a robot would relatively set aside a lesser amount of effort to absorb and execute directions and would give double the amount of effectiveness, as compared to a human. Machines also leave little room for error and execute the task given in accordance to the protocol set immune to external stimuli like emotions due to which humans deviate from their duties. More importantly, it is to create something that imitates or takes on a similar mindset as a human. As a transformative innovation, AI has the potential to challenge any number of legal assumptions in the short, medium, and long term. Precisely, how law and policy will adapt to advances in AI; and how AI will adapt to values reflected in law and policy depends on a variety of social, cultural, economic, and other factors, and is likely to vary by jurisdiction.[1]

The paper aims to look and understand the legal status and implications of patenting Artificial Intelligence (hereinafter referred to as "AI") across the globe.

Legal personhood is invariably connected to individual autonomy, but has however not been granted exclusively to human beings. The law has extended this status to non-human entities as well, regardless of whether corporations, ships, and other artificial legal persons. No law at present in force in India recognizes artificially intelligent entities to be

[1] Stanford University, One Hundred Year Study on Artificial Intelligence (AI100), Policy and Legal Considerations, https:// ai100.stanford.edu/2016-report/section-iii-prospects-and-recommendations-public-policy/ai-policy-now-and-future/ policy

legal persons, which has prompted the question of whether the requirement for such recognition has now emerged. The topic of whether legal personhood can be granted on an artificially intelligent entity comes down to whether the element can and should to be made the subject of legal rights and duties. The essence of legal personhood lies in whether such entity has the option to possess property and the ability to sue and be sued.[2]

There are a few arguments against granting AI's legal personhood:

- **The Responsibility Objection:** That AI's by nature would not be responsible. This objection focuses on the capability of an AI to fulfill its responsibilities and duties, as well the consequent liability for breach of trust.
- **The Judgment Objection:** That AI entities cannot be trusted to make the judgment calls that humans are faced with in their work. This argument basically follows from the moral dilemma of empowering AI to make decisions, which are moral and subjective in nature.

Perhaps an attributable dilemma and discomfort with investigating the possibility of development of legal personhood, or even going beyond the theories of legal personhood which allows corporations to be held liable, could be a direct result of the uneasiness that concerns the relationship between our concept of legal personhood and our concept of humanity.

Corporations are a prime example of artificial persons. The legal personality conferred upon corporates, serves as a decent point of reference for the contention for granting the same to AI. However, there exists a significant distinction between Corporations and AI. Corporations are fictitiously autonomous; the company's stakeholders control their decisions and the directors are held liable after the lifting of corporate veil in case the company acts against any statute or regulation enacted in the state. Artificial intelligence however, is actually autonomous. Artificial intelligence's users or even creators may not be liable for the actions of the AI. AI cannot be treated on par with natural persons as AI lacks (i) a soul, (ii) intentionality, (iii) consciousness, (iv) feelings, (v) interests, and (vi) free will. However, with Sophia, a social humanoid robot developed by "Hanson

[2] L. B. Solum. Legal Personhood for Artificial Intelligences. North Carolina Law Review, 70: 1231–1287 (1992).

Robotics", a Hong Kong based company, launched in April 2015, being granted citizenship by Saudi Arabia in 2017[3], it has become the need of the hour for legal systems across the world to address issues pertaining to the legal standing of AI, at the earliest.

In order to find a middle ground, it is suggested there be a possibility of granting AI a hybrid personhood, a quasi-legal person that would be perceived as having a bundle of rights and duties as selected from those currently ascribed to natural and legal persons.

The Constitution of India is the essential legal framework, which allocates rights and obligations to persons or the citizens of India. Unfortunately, Courts are yet to judge upon the legal status of AI machines, the purpose of which would clear up the existing debate of the applicability of the prevailing laws to AI machines.

However, the Ministry of Industry and Commerce in India, whilst recognizing the relevance of AI to the country as a whole and to highlight and address the difficulties and concerns AI based technologies and systems and with the hope to encourage development and improvement of such systems in India, the Ministry of Industry and Commerce had established a 18 member task force, comprising of experts, scholars, scientists and industry leaders, alongside the active participation of governmental bodies/ministries, for example, NITI Aayog, Ministry of Electronics and Information Technology, Department of Science and Technology, UIDAI and DRDO in August 2017, titled "*Task Force on AI for India's Economic Transformation*", led by V. Kamakoti, a professor at IIT Madras to explore potential outcomes to leverage AI for development across various fields. The task force has recently published its report;[4] wherein it has provided detailed recommendations along with next steps, to the Ministry of Commerce with regard to the formulation of a detailed policy on AI in India. Some of the key takeaways of the report are –

1. The report has identified ten specific domains in the report that are relevant to India from the perspective of development of AI based technologies, namely (i) Manufacturing; (ii) Fin-tech; (iii) Health; (iv) Agriculture; (v) Technology for the

[3] https://techcrunch.com/2017/10/26/saudi-arabia-robot-citizen-sophia/, last accessed on May 18, 2019.
[4]http://dipp.nic.in/sites/default/files/Report_of_Task_Force_on_ArtificialIntelligence_20March2018_2.pdf

differently abled; (vi) National Security; (vii) Environment; (viii) Public utility services; (ix) Retail and customer relationships; and (x) Education.

2. The report has identified the following major challenges in deploying AI systems on a large scale basis in India, (i) Encouraging data collection, archiving and availability with adequate safeguards, possibly via data marketplaces / exchanges; (ii) Ensuring data security, protection, privacy and ethical via regulatory and technological frameworks; (iii) Digitization of systems and processes with IOT systems whilst providing adequate protection from cyber-attacks; and (iv) Deployment of autonomous products whilst ensuring that the impact on employment and safety is mitigated.

Section 6 of the Indian Patents Act, 1970 states that an application for a patent for any invention can be made only by the true and first inventor of the invention or the persons assigned by such person.[5] Whereas, Section 2 (y) of the Act confines the definition of "true and first inventor" to the extent of excluding the first importer of an invention into India, or a person to whom an invention is first communicated outside India, and nothing further.[6]

These requirements do not explicitly impose the necessity of a creator to be a natural individual. Therefore, from a bare reading of these provisions, it may be interpreted that an AI may fall under the definition of an inventor as given under Section 2(y) of the Indian Patents Act, 1970. However, in practice the "true and first inventor" is constantly thought to be a natural individual. Therefore, it will be interesting to track the jurisprudence on this front especially the stand taken by the patent office when the "true and first inventor" on the patent application form is not a natural person.

However, AI will certainly play a significant role in the development of patent law itself. Sophisticated utilization of natural language processing has been adopted in generating variations of existing patent claims to amplify the invention's scope. The publication of these patent claims uses such technology would help preclude obvious and effectively

[5] Section 6 of the Indian Patents Act, 1970
[6] Section 2(y) of the Indian Patents Act, 1970

derived ideas from being patented, as they will form the corpus of the prior art that is available in public domain.[7] If the trend of using such services gains a foothold in the industry, it will substantially increase the uncertainty associated with the enforceability of a patent as the risk of not discovering prior art that invalidates the patent would increase.[8] Therefore, it could be anticipated that AI would be developed to aid discovery of prior art and correspondingly this would certainly increase the demand of AI (from a patent law point of view) in this area.

Technology is permeating the society at an ever-increasing pace. Everyday an ever-increasing number of gadgets are being connected to the Internet, paving the way to the regime of Internet of Things. It is only a matter of time before developments in AI combined with the use of smart gadgets would lead to profiling more intrusive than any before. Besides, with AI systems being progressively associated with functions such as data analytics, healthcare, education, employment, Internet of things, transportation, etc. has resulted in AI having the access a vast repository of Personally Identifiable Information ("PII"). With the capacity of AI systems, for example, Siri, Cortana and FBLearner Flow to utilize such PII to recognize standards of behavioral conduct of people and accordingly advanced a targeted advertising which is desirable over the concerned individual, showcases the degree of the effect that AI systems may have through the use of PII. However, it must be noted that information/data, while significant for generating incisive analytics as examined above would lead to larger questions relating to privacy and resultantly it is essential to have an existing/updated framework that adequately address such concerns. Such concerns pertaining to privacy have become more prominent in light of the recent judgment of the Supreme Court in *K.S Puttaswamy & Anr. v Union of India & Ors*[9] wherein the right to privacy was held to be a fundamental right under the Constitution of India. The Supreme Court also went on the state there is an immediate need for a comprehensive data protection framework / law to be enacted, which is technology neutral and which deals with important issues such as the growing use of Artificial Intelligence in India.

[7] Erica Fraser, "Computers as Inventors – Legal and Policy Implications of Artificial Intelligence on Patent Law", (2016) 13:3 SCRIPTed 305 https://script-ed.org/?p=3195
[8] *Id.*
[9] Writ Petition (Civil) No 494 OF 2012

The infiltration of self-driven cars, robots and fully automated machines, which are at currently being used in various economies around the world, is just expected to increase with the passage of time. Then, the dependency of entities and individuals on AI systems is also expected to increase proportionately. Liability for incidents involving self-driving cars is an emerging area of law and policy that will determine who is liable when a car causes physical damage to persons or property. As autonomous cars shift the liability of driving from persons to the autonomous car technology manufacturer, then there is a need for existing liability laws to change in accordance to fairly point out the appropriate remedies for damage and injury. Existing tort liability for drivers and insurers and product liability for manufacturer provide the current basis for governing crashes. In a crash involving an autonomous car, a plaintiff may have four options to pursue.

1. **Operator of the vehicle**: in Florida and Nevada, an operator is defined as a person who causes the autonomous technology to engage, regardless of whether the person is physically in the vehicle. California, on the other hand, specifies that an operator as "the person who is seated in the driver's seat, or, if there is no person in the driver's seat, causes the autonomous technology to engage." The viability of a claim against the operator will determine on the level of autonomy. For instance, if the autonomous technology allows the passenger to cede full control to the vehicle, then the passenger will likely not be found to be at fault for a crash caused by the technology.[10]
2. **Car manufacturer**: with this option, a plaintiff will need to determine whether the manufacturer had a part in installing autonomous technology into the vehicle. States such as Florida, however, are providing protection by limiting product liability for manufacturers.[11]
3. **Company that created the finished autonomous car**: Volvo is an example of a manufacturer who has pledged to take full responsibility for accidents caused by its self-driving technology.[12]
4. **Company that created the autonomous car technology**: Companies under this option could include those developing the software behind the autonomous

[10]https://www.nortonrosefulbright.com/en/knowledge/publications/2951f5ce/autonomous-vehicles-the-legal-landscape-in-the-us
[11] http://www.ncsl.org/research/transportation/autonomous-vehicles-self-driving-vehicles-enacted-legislation.aspx
[12] https://www.media.volvocars.com/global/en-gb/media/pressreleases/167975/us-urged-to-establish-nationwide-federal-guidelines-for-autonomous-driving

car and those manufacturing the sensor systems that allow a vehicle to detect its surrounding.

This may be evidenced from the fact that AI is expected to bolster economic growth by an average of 1.7% across various industries by 2035.[13]

More broadly, any software with access to the real world, including autonomous vehicles and robots, can cause property damage, injury, and death. This raises questions about civil liability or criminal responsibility.

In 2018, University of Brighton researcher John Kingston analysed three legal theories of criminal liability that could apply to an entity controlled by artificial intelligence.[14]

- **Perpetrator via another** - the programmer (software designer) or the user could be held liable for directly instructing the AI entity to commit the crime. This is used in conventional law when a person instructs or directly causes an animal or person incapable of criminal responsibility (such as a young child or a person with a severe mental disability) to commit a crime.
- **Natural and probable consequence** - the programmer or the user could be held liable for causing the AI entity to commit a crime as a consequence of its natural operation. For example, if a human obstructs the work of a factory robot and the AI decides to squash the human as the easiest way to clear the obstruction to continue working, if this outcome was likely and the programmer knew or should have known that, the programmer could be held criminally liable.
- **Direct liability** - the AI system has proved that the criminal elements of a recognized theory of liability, in criminal law. Strict liability offenses (like speeding) simply require an action (*actus reus*), but "conventional" offenses (like murder) require an intention (a type of *mens rea*). Criminal negligence involves non-performance of a duty in the face of evidence of possible harm. Legally, the courts must be equipped under the existing laws of assigning criminal liability to the AI system of an already existing self-driving car for over-speeding; however, it is not clear that this would be a useful thing for a court to do.

[13] https://www.forbes.com/sites/louiscolumbus/2017/06/22/artificial-intelligence-will-enable-38-profit-gains-by-2035/#2f7f30da1969
[14] https://www.technologyreview.com/s/610459/when-an-ai-finally-kills-someone-who-will-be-responsible/

Possible defences include unexpected malfunction or infection with malware, which has been successfully used in the United Kingdom in a case of a denial-of-service attack.[15]

Kingston identifies two areas of law, depending on the type of entity:[16]

- For products, product liability laws apply, including enforcement of warranties.
- For services, the tort of negligence may apply if the system failed to perform up to its duty of care.

The NHTSA investigation of a fatal 2016 crash involving Tesla Autopilot proceeded as an automobile product safety inquiry, and determined that despite the crash there were no defects that required a recall (though Tesla is working to improve the software to avoid similar crashes). Autopilot only gives cars limited autonomy, and human drivers are expected to maintain situational awareness and take over as needed.[17]

With fully autonomous vehicles, the software and vehicle manufacturers are expected to be liable for any at-fault accidents (under existing automobile products liability laws), rather than the human occupants, the owner, or the owner's insurance company.[18] Volvo has already announced that it will pay for any injuries or damaged caused by its fully autonomous software, which it expects to start selling in 2020.[19] Starting in 2012, some U.S. states have passed laws or regulations specifically regarding autonomous car testing, certification, and sales, with some issuing special driver's licenses; this remains an active area of law making[20]. Human occupants would still be liable for actions they directed, such as choosing where to park (and thus for parking tickets).

University of South Carolina law professor Bryant Walker Smith points out that with automated systems, considerably more data will typically be available than with human-

[15] https://www.technologyreview.com/s/610459/when-an-ai-finally-kills-someone-who-will-be-responsible/
[16] *Id.*
[17] https://www.nytimes.com/2017/01/19/business/tesla-model-s-autopilot-fatal-crash.html
[18] https://www.scientificamerican.com/article/who-s-responsible-when-a-self-driving-car-crashes/?redirect=1
[19] *Id.*
[20]http://cyberlaw.stanford.edu/wiki/index.php/Automated_Driving:_Legislative_and_Regulatory_Action

driver crashes, allowing more reliable and detailed assessment of liability. He also predicted that comparisons between how an automated system responds and how a human would have or should have responded will be used to help determine fault.[21]

However, in order to safeguard the development and integration of AI systems with the industrial and social sector, it is important that the current concerns that exist in relation to AI frameworks are suitably addressed to. The current concerns issues being (i) the issue of imputation of liability or in other terms the issue of holding an AI to be responsible for its actions; and (ii) the issue pertaining to the relationship / interplay between ethics, the law and AI and robotics systems.

While addressing the aforementioned, it would be imperative that the regulators undertake a reasonable and balanced approach between the protection of rights of citizens / individuals and the need to encourage technological growth. Failure to do so may either affect the protection of rights or on the other hand may adversely affect creativity and development. In addition, the regulations should also undertake ventures to provide for guidance / clarity with regards to the rights and obligations of creators or makers of AI systems, in order to crystallize the broad ethical standards to which they are required to abide to whilst programming / creating AI and robotics systems.

In conclusion, due to the lack of legal jurisprudence regarding this matter, it is hoped that sooner rather than later legal and tax principles are established which will not just stimulate the development of AI but also ensure that the necessary safeguards are in place.

[21] https://www.washingtonpost.com/news/innovations/wp/2018/01/25/after-crash-injured-motorcyclist-accuses-robot-driven-vehicle-of-negligent-driving/?noredirect=on&utm_term=.4e452654c4e1

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