

The Wave Of Innovation Artificial Intelligence And I P Rights

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Abstract

The paper provides a concise overview of the interplay between law and artificial intelligence. Based on the analysis of legal resources, it identifies key topics, organizes them in a systematic manner and describes them in general, essentially regardless of specificities of individual jurisdictions. The paper depicts how artificial intelligence is related to copyright and patent law, how law regulates artificial intelligence, with regard to the developments in artificial intelligence.

Keywords:

Artificial intelligence; algorithmic decision-making; human-computer interaction; intellectual property; law; legal reasoning; liability; machine learning; overview; privacy; robotics; society.

Introduction:

In computer science the term “artificial intelligence“ is widely recognized to be used for the first time in August 1955 in a proposal of a research project authored by John McCarthy, Marvin L. Minsky, Nathaniel Rochester, and Claude Shannon. The same expression was used in legal science already in 1848 by an unknown author in an article complaining about inefficiency of the jury system

The time has come when the world requires a new perspective on the advancements in technology. It is time that we human beings understand and accept that there can be intelligence superior to human intelligence. Innovation and creativity are reaching new levels every day and the same can be seen around the globe. The world has reached a level where there are services for everything required. We can simply talk to our phones and get all the works done. We can have our phones as our friends, helpers, guardians and as a companion as well. How has it all changed? What are the other things associated with it? Are we moving in synchronisation with the developing technology? We are at the stage where the recent controversy is with regard to the legal status of Artificial Intelligence (Hereinafter referred to as ‘AI’). In developed countries, most of the companies depend upon Artificial Intelligence for most of their work. With news of law firms hiring their personal AI as lawyers and Bill Gates discussing the taxation policies on works done by Artificial Intelligence, their legal status is a very vital question to even start discussing the other aspects.

We human beings consider ourselves to be the most intelligent creation of God and it is not totally false to say so. Man has created the computer which has made lives easier and it is the human beings

which are creating Artificial Intelligence which will take innovation to new levels of creativity. However, it also raises a question that if we human beings are creating an intelligence which is surpassing the intelligence levels of human beings, does that intelligence deserves credits and rights for the works done or created? There was a time when the entire concept of ‘artificial persons’ was brought up and the study of jurisprudence accepted the same. Is it the time for a change where any new concept for the Artificial Intelligence is required where the same can be given a kind of legal status? A term like ‘mechanical persons’ or ‘AI persons’ which can elaborate on the rights and liabilities associated with the same might be the distant future of law. With many examples of robots and artificial intelligence around the world, it is not justified to simply call them machines who are slaves to the human beings. Gone are the days where machines are the human beings’ slaves. Artificial intelligence is evolving everyday and it is helping the human beings in ways it had never thought of. However, is it a right step? Is the society ready to bring machines at par with the human beings? Can we accept it that the Artificial Intelligence can be smarter and more creative than human beings?

Identity and Status of Artificial Intelligence:

A major problem arises with this idea of giving the AI its own identity and status. The problem is as to the authority and rights associated with the creations of such Artificial Intelligence. A very simple instance would be that if I make a machine and that machine creates a drawing, I am entitled to the rights over the drawing. Just like a photographer gets credit for his pictures and not his camera, I shall get credit for any work created by my machine. However, what if the machine is not any ordinary machine and works on its own creativity which has been created by me? Can there be any right for that machine? Such machines are Artificial Intelligence which works on their own creativity and learning. Giving them their rights would bring an enormous change in the entire concept of law and persons. It will bring its liabilities attached with it and as Sir Bill Gates said in a recent interview, they might even have to be taxed for their work!

Artificial Intelligence and Intellectual Property Rights:

If we focus on the intellectual property rights associated with creations, we have to study the copyright laws which reward the rights over creations to the creators. The main objective of the Copyright Act, 1957 is to reward a person for his creativity and to give it rights over the same. It gives authors certain rights over its creations and thus finds its justification in fair play. The language of the provisions clearly define an author as an author of the work, the composer, the artist, the person taking the photograph, the producer and the person who causes the work to be created. The act however doesn’t define the meaning of ‘person’ and the General Clauses Act, 1897 inclusively defines a person as any company or association or body of individual, whether incorporated or not. The question here is whether this definition can include ‘artificial intelligence (AI)’ as persons to claim their rights over their creation? The point of debate here would be that can AI be ever qualified as persons? This would be a huge step in the history of laws over the world but it might be the need of the hour. The essence of law lies in the fact that law is dynamic in nature and the same shall understand that the world needs amendments in law whereby the AI should be given a status and identity of its own.

What is creativity? As Boden explains in the very famous ‘The Creative Mind Myths and Mechanisms’, creativity is the capability and ability to come up with new ideas or artifacts that are

new and exciting. Is it true that only we human beings are capable of being creative? Why can we not see from another dimension of this universe and see the animals being creative? Why can we not accept that our very own AIs are creative in nature? Is this too far-fetched? In the very famous case of the picture taken by a macaque, the Courts of the US did not agree on giving the copyright to the monkey on the grounds that works created by non-humans cannot be granted copyrights. Creativity lies in all minds. There is nothing which can prove that anyone but humans can be creative in their own sense. The concern of copyright law should be restricted to creativity and creations and not defining personhood. The topic of personhood is in itself a vast area where the definitions might change with time. This might be the future of Artificial Intelligence and its laws where the copyright laws would not hesitate to grant any non-humans rights over their creation.

Understanding creativity in the context of machines is a challenge in itself. Can machines possess the element of creativity? Isn't the creator of a machine mainly creative to build up something like an AI which can help humans in living a better life? In the 1970s, a very famous artist created a program by the name 'AARON' who could create paintings as creatively as human beings. In fact, it worked better than human beings and never failed to surprise its viewers with its perfect combination of colours and sketches. Its creator, Cohen had invested years in his work station to compile the codes, arrays and algorithms which were processed to instil creativity in AARON. AI researchers work endlessly to come up with that perfect combination of chances which can make its machine creative and it is then that an AI is created. There is no denial of the fact that the creators of the AI play the major role in making the AI but do they play the major role in creating works which their AI create? The same can be explained by an analogy where two human beings give birth to another human being but can they deprive the same from having its own identity? It might seem a little weird but as a child learns on its own capabilities which are definitely based on the DNA structure of his body given to him by the parents, the child develops and grows. The child is credited for works created by the child. Likewise, can it be said that a human being creates an AI as a parent to it and shall not deprive the AI from its rights over its creations? It is pertinent to note that back in the 19th century, the corporate laws were drafted where a company or corporate body created by human beings received as its own personality, name, address, stamp and seal. It has its own rights, liabilities and an identity most importantly. When a corporate body can be given copyright over its work, isn't it unfair to not consider AIs fit for copyrights?

Authorship is a very important element in the field of intellectual property rights. The Copyright Act, 1957 defines the word "author". In relation to any literary, dramatic, musical or artistic work which is computer-generated, the person who causes the work to be created shall be the author of the work. When Google's AI is creating 'trippy' and 'pricy' art, isn't the AI the one who causes the work to be created? It is undisputed that the AI has been created by someone but does creating it give it rights over all its creations? It would then be interpreted that the works or creations of children should be in the name of parents or teachers who have 'programmed' their basic concepts and abilities. In such a scenario, it is not possible since a child learns and grows with respect to its external environment. Is it possible for an AI to learn from its external environment similarly? Can a machine have consciousness and the ability to think? Assuming that a machine can be creative and learn from its external environment and grow with the help of its processing, the question of authorship still would remain a dilemma for the world to think about. In the case of *Meng v Chu*, the dispute was as to the authorship of the work created. The university laboratory leader took credit for creating a superconducting material whereas his research assistant claimed that she is the actual person who invented the process of synthesizing the material. A similar analogy can be drawn where the AI would

be the research assistant and its creator will be the leader who provided all materials to the AI and guided her throughout the invention.

Both the worlds of law and technology have to bring answers to these questions. As it is said that laws are made for the society and is thus dynamic in nature, the law has to evolve with the changing technology. Man has seen technology from days when super computers existed and there is about to come a time where man will have friends who would be Artificial Intelligence. They will be more than machines with an intelligence superior to the man but yet its companion. The law would recognize its 'next friends' to represent them and will give legal personality to the Artificial Intelligence who will be an inevitable part of the society. The world might not see such an environment very soon but it will happen one day and it will bring several issues along with it. The issues would be concerned with their personality, their duties, their rights, their liabilities and several other aspects.

As far as the copyright laws are concerned, it is time that the law considers the works of creativity of the AIs and adapt to the changing need of the society. There are several AIs that work on the coded programming done by its creator and generate works of art and 'creativity'. Let us analyze the authorship of a report generated by an AI out of data recorded and analyzed by it. It is true that it has been programmed in a manner to look through the web and make reports accordingly and interpret it based on the given instructions but isn't the AI using its own creativity to arrive to a conclusion or a report in this case. The creativity of machines has not been established yet but the same has been accepted by several scientists and AI researchers. As explained earlier, creativity has no rigid definition and simply implies to the capability and ability to think out of the box and come up with an idea or creation which has its own charm and is unique.

A change in the copyright laws will affect every other law and its aspect. It will not be limited to that particular sphere. It will further seek amendments in other intellectual property laws, contract laws, torts, criminal laws, taxation laws, insurance laws and every other law one can imagine. Is the world ready for it? Is it the right time to grant such a status to the robots where they will be at par with human beings or is it better that the machines be our slaves and not friends? Will the world be at advantage when the machines master the human beings? The advancement in Artificial Intelligence will affect the intellectual property laws to a great extent and the same has to be amended in synchronization with the technology. The refusal of trademark and copyright office to register AIs as intellectual property rights in the past has raised questions as to the identity and status of the AIs in the world. The definition and purposes of copyright law is to justify the rights of the creators and authors and the definition of author shall be adapted as per the needs of the technology. This adaptation will definitely raise questions as to the 'personhood' of the AI and will bring changes in many laws across the globe. Is the world prepared for this today? Will the world be prepared for this change in the future? As explained by Kahana in his paper, "Intellectual Property Infringement by Artificial Intelligence Applications", there are four levels of applications where level A applications are the most basic ones and level D are the ones which requires minimal level of outside interference to function. The element of outside interference plays a very important role in studying these different levels of applications and it is interesting to see that level D applications experience very little interference from external sources.

Therefore, if the AIs are not controlled by outside forces or instructions at the time of functioning, wouldn't it be a good instance of creativity? The paper by Kahana discusses that the AIs should be given property rights over their creation but the same shall come with duties and liabilities. As

jurisprudence teaches that with rights comes duties and with power comes liability, we cannot ignore the fact that the same AIs should have some duties against the rights vested in them. The solution discussed is that there should be a concept of iterative liability where the original developer of the AI would be held responsible for the infringement of laws by the AI but where it can be proved that the application behaved ‘sufficiently independent’, the developer shall not be liable for the infringement.

We are thus discussing a world where cases will be filed against AI and evidences will be required to prove crimes committed. At such a point, contractual laws would be of great importance for maintaining and regulating the laws for AIs.

Artificial intelligence (A I) – intelligent enough to be named an inventor in intellectual property rights?

It is said that artificial intelligence as any task performed by a program or a machine that, if a human carried out the same activity, we would say the human had to apply intelligence to accomplish the task.

Artificial intelligence (AI) a legal inventor?

U S A Legal Position:

In the outcome of a prominent case in USPTO, wherein, AI was named inventor and applicant; and try to understand how USPTO interpreted the law. Further, explores that what happens if similar scenario arises in India, and more importantly find out if Patent Act 1970 is rightly equipped to deal with it. Recently, an application was made in USPTO, entitled “Devices and Methods for Attracting Enhanced Attention”, (16/524,350) wherein an artificial system DABUS was identified as a legal inventor and the applicant. The Court delivered decisions relying upon the listed statutes-

35 U.S.C. § 100(f) provides: The term “inventor” means the individual or, if a joint invention, the individuals collectively who invented or discovered the subject matter of the invention.

35 U.S.C. § 100(g) provides: The terms “joint inventor” and “co-inventor” mean any 1 of the individuals who invented or discovered the subject matter of a joint invention.

35 U.S.C. § 101 provides: Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

35 U.S.C. § 115(a) provides: An application for patent that is filed under section 111 (a) or commences the national stage under section 371 shall include, or be amended to include, the name of the inventor for any invention claimed in the application. Except as otherwise provided in this section, each individual who is the inventor or a joint inventor of a claimed invention in an application for patent shall execute an oath or declaration in connection with the application.

35 U.S.C. § 115(b) provides, in pertinent part: An oath or declaration under subsection (a) shall contain statements that ... such individual believes himself or herself to be the original inventor or an original joint inventor of a claimed invention in the application.

35 U.S.C. § 115(h)(l) provides, in pertinent part: Any person making a statement required under this section may withdraw, replace, or otherwise correct the statement at any time. USPTO based its decision on the patent statutes, the Federal Circuit case law concerning inventorship, and USPTO regulations and specified that under current law, only natural persons may be named as an inventor in a patent application, hence denied introducing

Artificial intelligence (AI) as a legal inventor.

Indian Legal Position:

Let us explore the Indian stand by analysing the definitions and interpretations of “patentee and person” and persons entitled to apply for patent according to the Patent Act 1970. The Patent Rules 2003 also defines “Person other than a natural person”.

Patent Act 1970 – Definitions and interpretation

“Patentee” means the person for the time being entered on the register as the grantee or proprietor of the patent;

“Person” includes the Government; (t) “person interested” includes a person engaged in, or in promoting, research in the same field as that to which the invention relates;

Persons entitled to apply for patents

Subject to the provisions contained in section 134, an application for a patent for an invention may be made by any of the following persons, that is to say, by any person claiming to be the true and first inventor of the invention; by any person being the assignee of the person claiming to be the true and first inventor in respect of the right to make such an application;

by the legal representative of any deceased person who immediately before his death was entitled to make such an application. (2) An application under sub-section (1) may be made by any of the persons referred to therein either alone or jointly with any other person.

Patent Rules 2003

Definitions – In these rules, unless the context otherwise requires,— (day) “Person other than a natural person” shall include a “small entity”

Hence, referring to the Indian Patent Act 1970 and The Patent Rules 2003, a wider ambit has been provided to a person, and includes “natural person” and “other than natural person”; further, other than natural person comprises of large entity and small entity. As of now there is no clarification on Artificial Intelligence as an applicant and/or inventor in the Indian jurisdiction. However, if we interpret the definition of person according to the act and rules, an Artificial Intelligence is nothing but a virtual person/intelligence, and both the act and rules have not included such person. So it is clear that even in Indian jurisdiction a virtual person/intelligence may not be an inventor or applicant.

Concluding Observations:

Thus, it depends on its creators and the society whether it wants the Artificial Intelligence to be a servant who would serve them as per the instructions and directions or as a friend where both the creators and the AIs can work together to evolve the technological developments to an extent where the world would become a better place to live in. This might show the world the best thing or the

worst but combined training and efforts of the AIs and their creators might take the world to higher levels of development. There are multiple examples of Artificial Intelligence being successful in helping the world and where the works of the researchers and programmers have not shown expected results but the most important aspect here is that nothing should stop this evolution. There might also be cases where there will be disputes as to the liability for any wrong done by the Artificial Intelligence. The advent of AIs will also come as a huge storm to this world and will give rise to several issues like unemployment among the masses. The pointed to be noted here is that computers and other machines need human beings to operate them whereas Artificial Intelligence will not need any human control. It will thus replace jobs and will affect the economy to a huge effect. It will also bring about a lot of changes in the society and the attitude of man towards life. AIs might be the best thing or the worst thing for this world but the laws should keep pace with the same. Looking at the brighter side, the intellectual property laws should evolve as well and grant copyrights to the creative works of the man's next friend, Artificial Intelligence. However, the laws shall be drafted very well so as to consider the effects it will have on the other laws as well.

Innovation can be a boon and a bane. Technology is evolving at a rapid rate. It shows us something new every day. Law must evolve with it and amend itself in the interest of the citizens. Innovation is definitely required for the growth of a nation but it has to be noted that it also has to be acceptable for the society. Innovation brings a lot of other changes along with it and they all have their own impacts on the various fields of life. The law has to adapt to the changing technology accordingly and the same shall be pledged for the changing technology.

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