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Impact of Artificial Intelligence on Intellectual Property Rights

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Abstract

Artificial Intelligence which seemed to be a distant dream at some point has now come out of the science fiction movies to our reality and has gathered momentum over past few years and has led to many developments in almost all the sectors. No sector will remain untouched by artificial intelligence and Intellectual Property Rights too will not be an exception to the same. The impact of Artificial Intelligence in the field of Intellectual Property Rights will be two ways, on one hand Artificial Intelligence will prove to be an asset in the areas of patent and patent search tools, accurate and timely research, providing a mechanism to sort out inventions and ideas and provide with a mechanism to the innovator on the patents already existing similar to his idea and many other things but on the other hand the Artificial Intelligence might also prove to be a threat to innovation and creativity which is the heart and soul of Intellectual Property Rights.

The research paper will discuss in detail about the impact of Artificial Intelligence on Intellectual Property Rights, the pros and cons of Artificial Intelligence on creativity and innovation[1] in IPR and will also deal with the future scope of Artificial Intelligence in Intellectual Property Rights.

Keywords: Artificial Intelligence, Intellectual Property Rights, Copyright Law, Patent Law, Machine Learning

In the past few years we have seen rampant growth[2] of Artificial Intelligence (referred to as AI in this paper) and it is something which is capable of performing simple tasks like doing calculations to really complex tasks. In a nutshell in upcoming future, AI will be able to do whatever a human is doing and infact way more than that[3]. Still there is a lot of ambiguity regarding AI and the pros and cons of AI are one of the most debated topic these days. Though there is not a single accepted definition of AI but the most basic understanding is that it is about developing machines and softwares which are able to carry out functions which generally require human intelligence[4].

There is no doubt that the field of Intellectual Property has and will also not remain unimpacted by AI and the intersection of AI and Intellectual Property[5] might be two facet. On one hand it can prove to be an asset to the field of Intellectual Property but can also pose as a threat.

This paper will discuss in detail the impact of AI on Intellectual Property with specific reference to copyright, patents and traditional knowledge and will also discuss in detail regarding the liability in case of breach of Intellectual Property Rights.

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[1] Calvin Nathan & Leung Jade, 2020. Who owns artificial intelligence? A preliminary analysis of corporate intellectual property strategies and why they matter, https://www.fhi.ox.ac.uk/wp-content/uploads/Patents_-FHI-Working-Paper-Final-.pdf

[2] Tripathi Swapnil and Ghatak Chandni, 2018. Artificial Intelligence and Intellectual Property Law, Christ University Law Journal, 7(1)83-97, https://core.ac.uk/download/pdf/236436865.pdf

[3] *Id.*

[4] Gurkaynak Gonenc, Questions of Intellectual Property in the Artificial Realm, https://www.gurkaynak.av.tr/docs/8b791-rlj-september-october-2017-.pdf

[5] Renard Castets Celine, 2020. The intersection between AI & IP: Conflict or Complementarity, IIC-International Review of Intellectual Property and Competition Law, 51, 141-143,

https://link.springer.com/article/10.1007/s40319-020-00908-z

Future of artificial intelligence

At present AI has been able to perform the tasks involving human intelligence[6] and the research and development on AI is still going on and the functions which AI will be able to perform in the near future is beyond imagination[7]. But when we are discussing the benefits we must not forget that ultimately it is a machine and for a machine and there have been instances where the machine got beyond the control of the programmer and started performing tasks on its own. Now these tasks can be either constructive or destructive but it gets difficult to control the AI machine or program if it starts performing actions on its own and goes beyond the programmer's hands.

Though a lot has been done in the field of Artificial Intelligence but there are still many ambiguities which still prevails and there is hope that the same is being resolved in the near future and we will have a clear roadmap as to to what extent AI can function in human lives and in inventions as well.

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[6] Maheshwari Anmol, 2019. Dawn of Artificial Intelligence Changing the Face of Patent Regime, Amity International Journal of Juridical Sciences, 5, 126-135https://amity.edu/UserFiles/aibs/0dba2019%20AIJJS_123-end.pdf

[7] Shabbir Jahanzaib and Anwer Tarique, 2015., Artificial Intelligence and its Role in Near Future, Journal of Latex Class Files, 14(8), https://arxiv.org/pdf/1804.01396.pdf

AI & Copyright

In general terms Copyright is a right that vests with someone who has created his or her original work and the work can be literary work, song, any software[8] etc.

Though the intersection of AI and Copyright is not new and has been going on from many years but earlier there was no dispute pertaining to the fact that who will have the copyright over the work because the program or machine just worked as a tool for creating that work just like pen and paper and the idea or the work belonged to the programmer but with the advancement in AI and when we are creating machines with human intelligence which is capable of creating original work on it's own then the question as to who will have the copyright is being raised as to whether copyright will go to the programmer or the AI machine or program. Machine learning[9] is something which falls within the ambit of AI and in which data is being fed to the machine or program and the AI machine becomes capable of creating original work which is independent of any human[10].

Hence the growth of AI has also led to many ambiguities as far as copyright is concerned and there is need of clear rules and policies otherwise there is high probability of dispute in this regard.

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[8] Guadamuz, 2017. Artificial Intelligence and Copyright, https://www.wipo.int/wipo_magazine/en/2017/05/article_0003.html

[9] Margoni, 2018. Artificial Intelligence, Machine Learning and EU copyright law: Who owns AI?, https://www.create.ac.uk/artificial-intelligence-machine-learning-and-eu-copyright-law-who-owns-ai/

[10] Iglesias Maria, Shamulia Sharon and Anderberg Amanda, 2019, Intellectual Property and Artificial IntellIgence: A literature review,

AI & Patent

The intersection of Artificial Intelligence and Patent Laws is gaining momentum in the present day. Though on one hand AI will prove to be an asset for patent protection[11], patent search, patent search tools and for inventors also by giving them an insight at the very initial stage as to whether there exist a similar idea or not. Patent is all about invention and innovation and AI which is getting capable of having human intelligence can do inventions without input or intervention of a human[12]. When it comes to patent and AI, we need to look specifically into certain specific areas like:

Weapon: There is a global movement in warfare using AI machines and programs. The dispute as to how AI will be regulated under International Humanitarian Law though cannot be ignore but is outside the purview of this paper but the issue that if any weapon is being created by an AI machine or program, there is ambiguity as to who will get the patent for the same.

Medicine/pharma sector: When we talk about patents, pharma sector or invention of new medicines of utmost priority. Now when there is a situation where AI successfully creates a medicine, then there will rise an issue of patent. For example in the present situation where everyone is looking for a vaccine for the global pandemic corona virus and if in such a situation an AI machine invents a vaccine for the same, then there will be a lot of ambiguity as to who will have the patent of the vaccine, whether it will go to the AI machine or program or to the programmer who created that machine or to the purchaser of the vaccine. If this issue is not resolved then it can also not be determined as to how and at what price the vaccine is to be provided to other nations. Hence there is a need of nipping such issues in the bud.

Road safety: So many programs are being developed in order to ensure road safety but then too the number of deaths because of road accidents cannot be ignored. It is a possibility that AI can

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https://publications.jrc.ec.europa.eu/repository/bitstream/JRC119102/intellectual_property_and_artificial_intelligence_jrc_template_final.pdf

[11] Abbott Ryan, 2019. Artificial Intelligence, Big Data and Intellectual Property: Protecting Computer- Generated Works in the United Kingdom, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3064213

[12] (Anonymous, Artificial Intelligence Collides with Patent Law, 2018)

come out with a solution for the same wherein we can prevent loss of human life like cars without drivers can be invented. Apart from that there are companies which are already working on this aspect of road safety and using AI in it. Like Microsoft is coming up with a software having facial recognition wherein the behavior of the driver will be monitored and an timely alert can be raised to avoid any accident[13].

New technologies: Everyday we are coming up with many inventions and patent law is all about innovation and invention. As discussed above, there needs a clear picture as to who will have the patent in case of an invention by a AI machine or programmer, whether the patent will be with that machine or will it go to the programmer.

AI & Traditional Knowledge

Traditional Knowledge is something (maybe a skill or any know how or practice) which has been acquired or followed from time to time. The knowledge is passed on from one generation to other generation by that community[14]. There can be instances wherein AI might infringe traditional knowledge wherein it takes abstracts from the traditional knowledge which is already available.

Hence in view of the abovementioned discussion there might be a possibility that the Artificial Intelligence machine or program might infringe the traditional knowledge which forms a part of rich heritage of many communities.

Liability for infringement

This is one of the most debated topics as to who is liable when there is violation of Intellectual Property Rights by an AI machine. Whether the programmer will be responsible or whether the machine will be responsible or whether anyone else will be responsible. There is still ambiguity regarding this aspect.

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[13] Anonymous, 2019.Artificial Intelligence and road safety: A new eye on the highway https://news.microsoft.com/apac/features/artificial-intelligence-and-road-safety-a-new-eye-on-the-highway/
[14]WIPO, Traditional Knowledge, https://www.wipo.int/tk/en/

In case the programmer has knowledge that the machine will tend to infringe the Intellectual Property Rights, then in such a case the liability will fall upon the programmer as there was knowledge of the infringement behind creating that program or machine. However in case when there was neither knowledge or intention of infringing the Intellectual Property Right by the programmer and still the AI machine or program infringes the Intellectual Property Rights then it will be difficult to determine as to on whom the liability will fall upon.

Hence this is another aspect which is ambiguous and there is lacuna which needs to be filled in order to determine the liability of the Artificial Intelligence machine or program. In case the infringement is of such a kind where criminal liability is being incurred then how will the AI have individual criminal responsibility.

As we have observed above the issue of liability is of serious concern and needs to be addressed otherwise it would lead to a lot of disputes and confusions.

Conclusion

There is no iota of doubt that Artificial Intelligence can for sure prove to be an asset in the field of Intellectual Property Rights to certain extent like it can do many inventions which might take any human ages to do and can help in advancement of the nations but then there are so many lacunas and ambiguity regarding using Artificial Intelligence in Intellectual Property Rights but then AI can also prove to be a threat as there are issues of determining the liability in case of infringement. There is a need of policies and rules pertaining to Artificial Intelligence and how will the liability be determined. Also a clarity is need on who will hold the copyright, patent or any other intellectual property right over the work or invention of AI.

Hence Artificial Intelligence is still at a very initial stage and a lot of growth is happening and there will be no end to the debate on Impact of Artificial Intelligence be it on any sector or specifically on Intellectual Property Rights till the time there are laid out rules on the use of AI, it's liability and to what extent AI can be allowed to interfere.
A roadmap for AI, its functioning, control and liability is the need of the hour keeping in mind the pace with which AI is growing at present. In a nutshell AI is very beneficial if it is within the control of the programmer but the moment it starts functioning on its own without any external control, it might pose as a threat to not only the field of Intellectual Property Rights but to every one in general.

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WIPO, Traditional Knowledge, https://www.wipo.int/tk/en/