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Co-Existence of Intellectual Property Rights and Artificial Intelligence

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The modern world has gained intense and widespread momentum in the development of the cyber sector. One such field is that of Artificial Intelligence. Artificial intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions. The term may also be applied to any machine that exhibits traits associated with a human mind such as learning and problem-solving. It has successfully incorporated complex technologies in our lives and has thereby helped mankind by making unimaginable inventions in a short period. It has not only indulged in the field of intense programming but has also worked wonders in the field of creative works like poetry and art. Therefore, the question arises whether or not Artificial Intelligence is capable of being protected under Intellectual Property Rights like any other creative as well as complex field of work is covered. The area of Intellectual Property will be challenged by the rising trends of Artificial Intelligence in times to come. The present system of creation will be replaced by Artificial Intelligence run machines. The Artificial Intelligence-based mechanism and machines are growing creative and are transforming the already existing Invention system. This transformation calls for a re-examination of the existing and all related supported legal doctrines. This article discusses the current position of AI and proposes its use for IP administration. It also highlights the different problems attached to such application like ownership, infringement, third parties etc. Further, the article enumerates the vision of the author with respect to the future of IP administration using IP mentioning some real-time cases as examples.

I. SHOULD ARTIFICIAL INTELLIGENCE BE ALLOWED TO OWN INTELLECTUAL PROPERTY?

In days to come it is quite evident that Artificial Intelligence will be the major source of new and innovative ideas and creations, which unfortunately will create an environment of ambiguity over the ownership rights. Due to the absence of a clear legal provision to deal with Artificial Intelligence, the same has become more of a concentrated grey area zone which will be difficult to define in future. In the present era Artificial Intelligence is seen

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more than just an Intellectual Property tool but if things go the right way then maybe Artificially Intelligent machines could be the deemed owners of the intellectual property, provided the jurisdiction and legal system of the country in question support the same. Artificial Intelligence may be assigned protection under Intellectual Property Laws but whether these artificially intelligent machines could be held liable for infringement of owners of intellectual property is still an issue to be resolved because currently intellectual property rights protection privileges are only given to natural persons and legal entities.

It can be argued that Artificial Intelligence lacks the basic requirements to own Intellectual Property Rights, but it cannot be ruled completely that if proper legislations are framed and implemented then maybe there can be a change in the present scenario. However, it can undoubtedly create music, art, and other intellect based properties. Thus, there might come a day when the concept of 'electronic person', which was rejected by the European Union, might come to exist. A possible scenario can be imagined wherein artificial intelligence attains the level of intelligence and self-awareness like that of a human. Many other rights needto be attained to successfully get the status of protection under Intellectual Property Laws. For instance, in late-2017, Saudi Arabia announced that it was considering awarding national citizenship to Sophia which was an Artificial Intelligence-based robot manufactured by David Hanson of Hanson Robotics. The idea did not go any further because the move wasn't hailed as a step forward in human rights as critiques argued that Sophia enjoyed rather more rights than the country's women.[2]

II. USAGE ARTIFICIAL INTELLIGENCE FOR THE ADMINISTRATION OF INTELLECTUAL PROPERTY RIGHTS

Volume, Quality, and Cost are the three major driving forces of the administration of the Artificial Intelligence and Intellectual Property Rights system. The recent data available with the World Intellectual Property Organization (WIPO) has shown that there is a rapid increase year on year in the volume of applications received by WIPO. This has not only challenged the number of examinations of the application thereby causing a delay but also affects the intellectual capacity of the human resources thereby causing damages to the quality of the decisions made. In today's world where Intellectual Property has turned out to be a major source of commercial gain, the delay or any other shortcomings in the application will not

[2]Robert David, *Saudi Arabia's Robot Citizen is Eroding Human Rights*, QUARTZ (January 27th 2021, 6:58 PM), https://qz.com/1205017/saudi-arabias-robot-citizen-is-eroding-human-rights/

only cause financial damages but will also affect the applicability of the Intellectual Property in question.

It is neither possible nor rational for a human to examine millions of applications received each year to determine whether the applicant qualifies for registration or not. WIPO, taking into consideration the above scenario has developed an Artificial Intelligence embedded search engine and has been embedded into the Global Brand Database resulting in quick and accurate results.[3] In an interview with WIPO Director General, Francis Gurry, said that Artificial Intelligence can be a resort to achieve better quality and reducing administration cost amid a rapid rise in demand for Intellectual Rights protection.[4] Thus it can undoubtedly be said that in days to come Artificial Intelligence will play a major role in the administration of Intellectual Property Rights. Here, again there is a need for a meeting of minds at the international level. The alignment with the already existing and conventional system is also necessary so that there is a collective approach on part of the international community and appropriate allocation of resources and data whereby that there can be an effective and precise functioning of the artificial intelligence system, making the entire process cost-effective.

The conventional approach of WIPO has been to develop innovative ways to explore artificial intelligence embedded software that can be integrated into applications using training data provided by the international nation-states and other international institutional partners. WIPO as a return for this collaboration shares with them the fruits of the research carried out, in the form of application based on the usage of that same data. For these information-based transactions, WIPO has been able to formulate an exceptionally advanced Artificial Intelligence embedded neural machine translation tool which goes by the name of WIPO Translate which is being shared among 14 intergovernmental organizations and various patents offices at a global level. This international access ensures the appropriate application of this knowledge for its use to innovate or to improve already existing devices or platforms. This will in turn result in the global development of these tools into one which are comparatively more efficiently and cost-effectively. The process of examination and search facilitation has been made highly capable and easy by tools provided by Artificial Intelligence. Artificial Intelligence has also eased the process of automatic classification of patents, trademark, and copyright applications. The University of Geneva in collaboration

[3]*WIPO Launches State-of-the-Art Artificial Intelligence-Based Image Search Tool for Brands,* WIPO (Jan. 27 2021, 7:08 PM), https://www.wipo.int/pressroom/en/articles/2019/article_0005.html
[4]*An Interview with WIPO Director General Francis Gurry,* WIPO, (Jan. 27 2021, 7:11 PM), https://www.wipo.int/pressroom/en/news/2019/news_0002.html

with WIPO has developed and established an automated tool for classification of patents to assist the system of International Patent Classification (further stated as **IPC**) which works on the technology of neural networks.

III. INTELLECTUAL PROPERTY RIGHTS GIVEN TO ARTIFICIAL INTELLIGENCE

Artificial Intelligence is believed to have the capability to develop, file and grant protection under Intellectual Property in a few years. This will act as a real problem and will be a major threat to the basic principle and existence of Intellectual Property Rights. There have been numerous studies and talks about Artificial Intelligence's effect on the Intellectual Property rights regime.

It is said that Copyright Law only grants protection to the fruits of Intellectual Labour which are founded in the creative powers of the mind. Keeping up the mentioned ideology various copyright offices have mentioned that they won't register machine-made work. They contended that machine-produced work may give rise to a dilemma regarding the innovation involved a novel work because they are created by artificial intelligence-enabled machines. If everything is left up to the artificial intelligence-enabled machines with no human intervention, then a plethora question surfaces in front of us like: Who will the patent's ownership be given to when such patents are prepared by Artificial Intelligence embedded machines? In times to come, will the ownership be given wholly to the Artificial Intelligence Robot who is responsible for the invention? In case of division of ownership into multiple entities, which entity shall have the power to enforce the rights on such ownership? In case there is plagiarism committed on part of the Artificial Intelligence embedded machine, how will the damages be determined? These are a few fundamental but puzzling issues that the patent system would face as artificial intelligence continues to be integrated into the Intellectual Property Rights structure.

IV. THE COMPLEXITIES OF ARTIFICIAL INTELLIGENCE IN THE SECTOR OF INTELLECTUAL PROPERTY

Intelligence in the field of technology has undoubtedly displayed varieties of benefits and has the potential to overturn and improve various aspects of life,[5] including its impact in the world of Intellectual Property.

[5]Janna Anderson, *Artificial Intelligence and the Future of Humans*, PEW RESEARCH CENTER (Jan. 27 2021, 7:21 PM), https://www.pewresearch.org/internet/2018/12/10/artificial-intelligence-and-the-future-of-humans/

1. OWNERSHIP OF INTELLECTUAL PROPERTY:

Protection can be given to subject matter created by the Artificial Intelligence embedded machines. Artificial Intelligence can easily help in the creation of art, writing a piece of literature, developing a new brand, or even designing an object (even 3D objects). It has shown signs of being capable to develop new technologies and pharmaceutical drugs which would in-turn attract protection under patent law.[6] It is therefore unlikely that it would have any impact on Trademark ownership if a particular trademark is created by Artificial Intelligence embedded machine. The question of ownership of matters created by Artificial Intelligence remains a much-disputed topic as related to ownership of other forms of work created. Granting citizenship has already being witnessed by the world in the case of Sophia. In 2017, Sophia a social-behaviour based enhanced robotics machine which was granted Saudi Arabian citizenship, although it is too early to discuss the possibility of Artificial Intelligence machines having rights equivalent to that of humans. The legislation acknowledging the legal rights and personalities of Artificial Intelligence machines is not expected to arise in the near future but debates and opinions will continue to pour in rapidly in years to come. Conventionally, the idea of innovation has always been considered a basic human venture.

Recently, The European Patent Office (EPO), dismissed the idea that an Artificial Intelligence embedded the machine could be designated as an inventor in a Patent Application. This was abouttwo patent applications, filed by an individual in autumn 2018, the applications EP 18 275 163 and EP 18 275 174, that designated an Artificial Intelligence called DABUS as the inventor. During the Non-Public hearing on this application, it was discussed the fact that the European Patent Convention does not specify that the inventor must be a Human Being.[7] This loophole or language of the law was being exploited by the applicant and it took only 21 minutes of debate and deliberation by the European Patent Office Receiving Station and the application which was first of its kind was dismissed. Although the applicant only tried to claim that the designation of the inventor for the Artificial Intelligence machine and not the ownership to be given to the Artificial Intelligence machine, the European Patent Office was not satisfied and therefore refused the application. The application failed to address the multiple interesting questions about the rights

[6]Hayleigh Bosher, *WIPO Impact of Artificial Intelligence on IP Policy*, BRUNEL UNIVERSITY LONDON, LAW SCHOOL & CENTRE FOR ARTIFICIAL INTELLIGENCE (Jan. 27 2021, 7:30 PM), https://www.wipo.int/export/sites/www/aboutip/en/artificial_intelligence/call_for_comments/pdf/orgbrunel.pdf

[7]*European Patent Office, EPO publishes grounds for its decision to refuse two patent applications naming a machine as inventor*, EUROPEAN PATENT OFFICE (Jan. 27 2021, 7:42 PM), https://www.epo.org/news-events/news/2020/20200128.html

concerningArtificial Intelligence and under what circumstances can ownership be given to the same. This act of dismissal and state of being unsatisfied shows that the European Patent Office is not ready for the idea of Artificial Intelligence having ownership of Artificial Intelligence machines made inventions and treat such Artificial Intelligence ownership of Intellectual Property seriously.

2. INFRINGEMENT OF INTELLECTUAL PROPERTY:

Having discussed the aspect of Artificial Intelligence's ownership of an Intellectual Property, it now comes to the point where the question arises whether Artificial Intelligence can infringe an Intellectual Property or not. In case the Artificial Intelligence machine is given the power to generate matter, ultimately the question of responsibility arises as in if the Artificial Intelligence machine in question will be held responsible for the infringement or not. The most interesting question in the context of copyright infringement is the requirement for copying of the actual work. In the case of an Artificial Intelligence enabled machine, it is quite possible that the machine has access to a worldwide network and therefore has enough access for the requirement to be fulfilled. This makes proving the fact that an infringement occurred is much easier to be proved due to the wide access.

This again gives rise to the need for various legal explanations like the need for legal rights and personalities attached to an Artificial Intelligence embedded machine. If yes, then the need to know whether Artificial Intelligence machine can be sued for legal infringement, and if not whether who would be held responsible for Artificial Intelligence machine caused infringement and whether a human individual can be held accountable for the actions of Artificial Intelligence machine.

Again, a variety of complex legal questions emerge with the definition of Artificial Intelligence's concepts of creating the matter, like, if there are enough legal grounds for the legal personality for an Artificial Intelligence embedded mechanism to be sued for violation? If not, who is accountable for the copyright infringement committed by the Artificial Intelligence embedded machine? Is it legal and justified to hold a person to account for the actions of an Artificial Intelligence embedded system and to make the person responsible for the infringement of the said act? It will be very tricky and the concerned authorities have to be very careful while providing a pragmatic answer to the above questions and clearly defining the intricate and delicate boundaries attached thereafter.

3. ARTIFICIAL INTELLIGENCE AND NEW CONSUMERS:

An important role in the case Trademark Law is played by the consumers. Several questions arise regarding controversial proceedings between Trademark owners when it comes to the point where the perception of average consumers plays a major role.[8] The main aspect of the controversy is whether an average consumer will be confused concerning a trademark.

In a world where technologies like Amazon Dash Buttons, which can automatically re-order groceries and other commodities as and when required, it is quite possible to state that there will be a time when Artificial Intelligence embedded machines can do the shopping and other related chores. In such a scenario the impact of this form of development on the average consumer needs to be addressed for the purpose of confusion that arise with regard to Trademark Law. The question arises whether it would be possible for an Artificial Intelligence embedded machine will get confused between various products with a similar trademark. Another question arises if an Artificial Intelligence embedded machine can raise the level of attention required by a consumer to identify and distinguish between trademarks if it becomes a general practice to place orders of certain goods using Artificial Intelligence and not humans.

Another important challenge that Artificial Intelligence poses is the loss of intellect capacity and the change in the concept of exercising skills if there is a surge in Artificial Intelligence-based creation.[9] Concepts and terminology are known to skilled individuals that can be put to use in the field of routine work and experiments. Artificial Intelligence tools are commonly accessible to the skilled persons for common use and any type of application of such Artificial Intelligence is assumed to be known to the common mass.

So, if a new legislation is introduced in the future which enables patents to be allotted to inventions, invented solely by a system that is fully dependent on Artificial Intelligence for its functioning, and then is it likely to be possible that the skilled person is integrated into an Artificial Intelligence system, losing the touch of humanity.

4. RIGHTS OF THIRD PARTY:

Third-party rights in the case of Intellectual property rights play a major role. The breach of these third-party rights is a major cause of concern for the organizations which would go to any extent to protect their business, goodwill, and market share.

[8]Gerd Kunze, *Introduction to Trademark Law and Practice* World Intellectual Property Organization 2) (1993), https://www.wipo.int/edocs/pubdocs/en/wipo_pub_653.pdf
[9]Jessica Harris, *How Artificial Intelligence is Transforming The World,* BROOKINGS (Jan. 28 2021, 11:18 AM), https://www.brookings.edu/research/how-artificial-intelligence-is-transforming-the-world/

Developers in days to come must take steps to ensure that the risk created by embedding the already existing knowledge of Intellectual Property Rights into an Artificial Intelligence system remain under check and is limited within a particular bar. If the intellectual property community accepts Artificial Intelligence as an integral part of its structure then it would be required for the developers to instil a command into the Artificial Intelligence system which would ask it to respect the rights of third parties especially in those cases where the whole operation would be carried out by an Artificial Intelligence system rather than being supervised by a Human at regular intervals.

5. CREATION OF CONTENT:

The use of Artificial Intelligence in content creation is another challenge that companies face when it comes to protection under Intellectual Property Law. Human Input may be removed or limited if there is an accurate use of Artificial Intelligence. The definition of ownership in the case of copyright states that the human author reserves all the authorship rights, so it would be difficult to classify or designate an Artificial Intelligence as an author.[10] The level of intellect used by a human can never be levelled by Artificial Intelligence as Artificial Intelligence will always a step below in the field of exercising skill, labour, and judgment or even being engaging in the field of intellectual creation. Although extensive training and level of programming may help in narrowing the bridge between the level of originality and thereby ultimately enabling artificial intelligence to create specific types of content or in building the underlying learning algorithm.

V. CONCLUSION: VISION AND SUGGESTIONS FOR IMPROVING THE ADMINISTRATION INTELLECTUAL PROPERTY

Artificial Intelligence is bound to play an important role in the field of Intellectual Property Administration in the days to come. There must be an encouragement in the global scenario if the Intellectual Property regime needs to the huge chunk to be the fed of Artificial Intelligence in an efficient way. Collaboration at the global level will help in reducing costs of individual research and development thereby enhancing the rapid integration of Artificial Intelligence in the Intellectual Property regime. Deployment of Artificial Intelligence for Intellectual Property Management would help in achieving a high level of interoperability in the global intellectual property community in a cost-effective way. World Intellectual Property Organization strives to explore better mediums and ways to develop and integrate

[10] Lucy R. & Meril M., *Artificial Intelligence And Copyright – The Authorship*, MONDAQ (Jan. 28 2021, 02:25 PM), https://www.mondaq.com/india/copyright/876800/artificial-intelligence-and-copyright-the-authorship

Artificial Intelligence in intellectual property systems using data provided by member states and any other stakeholders who may be involved in this new avenue. The member states in return get access to the latest Artificial Intelligence-based applications which are developed using the data provided by them. Technological advancement in the field of Artificial Intelligence raises various Intellectual Property based questions, including the very essence of the current Intellectual Property Law regime. Humans can be held responsible whenever an issue with respect to intellectual property protection arises.

In the novel scenario, when artificial intelligence would be integrated into the intellectual property regime the legal solution would be to look for the humans behind the artificial intelligence, irrespective of whether he or she exists or not. With Artificial Intelligence evolving at a rapid rate and the Intellectual Property being encouraging the creation and distribution of a wide variety of goods to the benefit of consumers, an intensive amount of research would be needed in order to ensure that the Intellectual Property regime serves its purpose in the Artificial Intelligence era.

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