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Article:	**Developing a Fair Use Framework for AI-Generated Content in Pakistani Copyright Law: A Doctrinal Legal Analysis**
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ABSTRACT

In the rapidly evolving landscape of intellectual property rights law the intersection of artificial intelligence and copyright presents extraordinary challenges and opportunities. Current research paper conducts a comprehensive doctrinal legal analysis to develop a fair use framework of AI generated compatible with the socio-economic context of Pakistan. Applying W. P. Saunders' Research Onion layers methodology, Positivism has been selected as philosophy. The doctrinal research design has been based on comprehensive assessment of legal doctrines, statutes, principles of other legal systems, case law, academic research and reports. The chronological horizon spans historical perspectives of copy right law. Primary data collection involves a thorough analysis of legal documents. The study compressively analyzes the practical challenges and opportunities associated with implementing a fair use framework for AI-generated content in Pakistan. Through a comparative legal analysis, selected fair use models from jurisdictions with similar socio-economic characteristics have been scrutinized to identify transplantable legal principles compatible with Pakistan's context. The research critically examines the implications of legal transplantation, considering the adaptability and effectiveness of foreign fair use models. The proposed fair use framework seeks to strike a balance between protecting creators' rights and promotion of innovation within the AI sector. The interpretation of findings explores the socio-economic implications of AI-generated content within Pakistan, aiming to contribute to the ongoing process of legal reforms.

Key words: Artificial Intelligence, Copyright Law, Fair Use Framework, Socio-economic Context, Legal Transplant

I. Introduction

The unprecedented surge in technological innovation has started the beginning of the fourth industrial revolution {White, 2019 #105}. AI has been regarded as the key transformative technology amidst the said advancements. The term AI was first used by John McCarthy in 1956{Merino, #106}. The term AI has not been defined in the legal world, however, AI may be stated as the tendency of machines to perform the task that would otherwise require human intelligence {Russell, 2010 #107}**.** Artificial intelligence is based on an artificial neural network, making machines capable enough of generating work with minimal or no human intervention at all. The paper at hand is intended to deal the AI-assisted work and AI-generated work in the ambit of copyright law of Pakistan and other jurisdictions having worked on a concerned domain. AI-assisted work and AI-generated works are posing a direct challenge to contemporary copyright acts that inculcate a human-centered approach thus leaving the world in a puzzled situation, not knowing whom, and whom not ought to be granted authorship in AI-generated work. This research paper intends to understand the intricate relationship between artificial intelligence, copyright law, and the development of a legal framework in Pakistan that could address issues unraveled by AI in the arena of copyright laws.

II. Methodology

W.P. Saunders' research onion layers methodology has been used in the research at hand. This method of research is compared with onion peeling where one reaches the core of onion after peeling it layer by layer. Similarly, we will delve deeper and deeper into the topic by means of legal doctrinal analysis at its core to come up with the most needed amendments required in the ambit of copyright laws in Pakistan due to technological advancement in the contemporary world.

III. Historical Perspectives of Copyright Law in Pakistan and Artificial Intelligence

Current copyright laws being followed in Pakistan take their validity from The copyright ordinance of 1962, the stated set of laws in turn is modeled on the Copyright Act of 1914. Myriad changes have been to the ordinance via the Copyright Amendment Act 1992, and the copyright (amendment) Ordinance 2000.

Since the copyright ordinance in 1962, Pakistan has been based on the traditional approach of granting copyright protection to human-generated work, the provision on artificial intelligence is to be seen nowhere in the stated ordinance. It is pertinent to mention that some of countries including China, the USA, United Kingdom have done considerable work on the topic at hand. However discussion and regulation on the matter remain to be in infancy in Pakistan as of February 2024.

The contemporary legislation of Pakistan seems to be outdated when viewed from the artificial intelligence lens because no specific stance has yet been adopted by the Pakistan Copyright Board on the said topic as of now. Originality, authorship, and infringement are to be considered on a primary basis when attempting to bring the Pakistan copyright ordinance at par with artificial intelligence. For the time being, Pakistan may observe how other jurisdictions are updating their copyright laws influenced by artificial intelligence and later on may transplant the effective legal provisions while legislating on the said topic, keeping in view the socio-economic situation factors of Pakistan.

IV. Doctrinal Legal Analysis

Doctrinal legal analysis will be used in the research paper at hand to understand the concept of authorship, infringement, and originality in the context of Artificial intelligence. When discussing the element of originality of the content to qualify the prerequisite of being granted copyright protection in the realm of artificial intelligence, one cannot deny the fact that the AI being based on an artificial neural network {Ahuja, 2020 #124}**,** is capable enough of creating creative content even with minimal human intervention, thus fulfilling the criteria of originality.

Similarly "The requirement of Skill and judgment in originality may be deemed to have been satisfied by the virtue of programming and parameter on which such AI compiles and creates the work"{Philip, 2022 #109}.

However, the principle, of originality may not be fulfilled when delving deeper into the Canadian copyright law in the context of AI. The Canadian Copyright Act just as in other common law jurisdictions, requires originality in the work to be granted copyright protection. However, it is worth noting to consider the fact that the term "originality" itself has not been defined by the Canadian Copyright Act{Hancock, 1998 #110}**.**

In 2004 the Supreme Court of Canada in CCH V, Law Society of Upper Canada shed some light on the originality requirement. " However, what can be seen as a new standard of originality recently developed by the Supreme Court of Canada (SCC), could give some guidance in addressing the issue" {Smyth, 1968 #116}**.**

Supreme Court of Canada was of the view that for the work to be original in the meaning of the copyright act, it must be more than a mere copy of another work, and at the same time, it needs not to be intimately unique and novel, however, made emphasis on skill and judgment. The word judgment is defined by the said court as the ability or capacity to form an opinion or evaluation based on the available information. There is no vivid evidence that the AI possesses consciousness, and the ability to form an opinion and criticism the same way as humans do thus AI fails to satisfy the criteria of originality in the Canadian jurisdiction. Above stated facts present just a single issue among a constellation of issues, when concerning contemporary copyright laws in the realm of AI. The multifaceted problems unravel when dealing with the principle of authorship based on AI-generated work. It is pertinent to mention the difference between AI-generated work and AI-assisted work.

(I) AI-assisted work requires human intervention and prompting and to more extent, the user of AI is aware of the outcome of AI. In US jurisdiction, if a person comes up with a creation and proves that he merely used an AI program as a tool that assisted him in the said creation, he may be entitled to copyright protection. This was made clear by the 1884 Supreme Court case of Burrow Giles lithographic co. vs Sarony{Subotnik, 2015 #112}.

In the case law mentioned above, Napoleon Sarony captured the image of writer Oscar Wilde via camera. The Supreme Court extended copyright protection to the photography citing camera was merely used as a tool that added the author in creating an original work of art. The instant case may very well be compared to AI-assisted work where AI could be deemed to have been used as a tool for the creation of content thus making it deserving enough to be granted copyright protection.

(II) The Secondary category is when work is autonomously generated by the AI with no human intervention. It becomes difficult enough to determine the author in the instant case,

among AI, the programmer of AI, or the user {Abbott, 2016 #113}. This category has not been vividly explained by legal researchers however one may deem it a stage where an AI user may prompt one thing and the AI being based on artificial neural networks may come up with a generation that is not intended by the user. The world is confused by this very specific category, a lagging legal framework specifically dealing with this issue of authorship in AI-generated creation rather than AI-assisted generation.

"The U.S. Copyright Act does not directly address the matter of works independently created by computer programs, thus leaving the subject open to interpretation by the courts, scholars, and the U.S. Copyright Office"{Kasunic, 2015 #114}. However one may resort to the U.S. Copyright Act of 1976, the amendment was made to the said act in 1980 which stipulated that the computer programs being capable enough of generating work autonomously, the source code of the said computer program is copyrightable under the US Copyright Act. However, work generated autonomously by the computer program is not copyrightable under the US Copyright Act because it is not directly influenced by the human author{Keplinger, 1981 #115}.

This complexity could easily be understood by the example mentioned in the US Copyright Act, which says that weaving machines sometimes create random patterns in fabric without any predictable design. The resulting patterns in the instant case would not be liable to be copyrighted by the US copyright act because the generated patterns involve no human author rather the said pattern was based on the machine's decision. This comes in the ambit of computer-generated work CGW, which can be associated with AI-generated content. Computer-generated work and AI-generated work both seem to resemble each other because in both cases, creation is done with no human intervention, and the output received is not intended by the author himself. American copyright, as stated above has cleared its stance on computer-generated work and computer-assisted work. Computer-assisted work is liable to be granted copyright status however where creation is done by a computer program autonomously or its creation is not directly influenced by the human author, copyright status may not be granted in that instance.

It is pertinent to mention that the Canadian jurisdiction has no specific legislation on the CGW (computer-generated work) {Smyth, 1968 #116}. The ongoing discourse was intended to make a resemblance between the terms 1, computer generated work, 2, Computer assisted work, 3 AI assisted work and 4, AI generated work. I have vividly stipulated the stance of American and Canadian jurisdictions on Computer-generated and computer-assisted work. Legislation on AI-generated work (which involves no human intervention) is yet in nascent stages.

Principle of Authorship in AI-generated work

Dealing with the principle of authorship in AI-assisted work might be an easy task because the work generated in such a scenario is created via human guidance and such a person may claim its authorship, however, "Materials produced solely by nature, by plants, or by animals are not copyrightable"{COHEN, 2014 #117}. Even on an international level, the Berne Convention of 1886 did not address non-human authorship{Ricketson, 1991 #118}. In case AI-generated work or content created autonomously by AI unravels myriad problems in terms of authorship, mentioned as below:

a. Contemporary copyright acts are based on human-centered creativity {COHEN, 2014 #119}, if authorship is granted to AI in AI-generated work autonomously (no human intervention), this would directly challenge the contemporary copyright acts because they do not have the capacity to inculcate in them space for AI authorship, acts would need to be updated or redefined.
b. If AI is granted authorship in AI-generated work with no human intervention, this would mean the preference of machine creativity over human creativity moreover one may assume the fact from such instance that human creativity and machine creativity would stand on the same platform. It would be difficult to create a balance between the two while keeping in consideration that modern-day copyright acts are more tilted to human-based creativity than AI.
c. Preferring machine creativity over human creativity as stated above, or bringing both on the same pedestal would mean a death to human-based creativity.
d. If the same prompts are given on the same model, AI would tend to generate the same output, thus failing the condition of creativity and uniqueness in work {Ahuja, 2020 #124}, how would one justify granting authorship to AI in such an instance is another question at hand to be dealt.

`However, situation is different in civil law jurisdiction, "The premise which reflects from civil law countries such as Germany, France and Spain indicates that works created must bear the "imprint of the author's personality". The authorship, therefore, should be denied to AI in the AI-generated works as the AI does not have personality{Iaia, 2022 #121}.

Infringement in the realm of AI-generated work

One may not doubt the potency of AI to generate flawless content, however if it happens to come up with content deemed abhorrent for any specific segment of society, and tend to create chaotic situation in a region over defamatory or toxic use of words {Coleman, 2021 #122}, it would be difficult in such instances to held AI liable for prejudicial acts since, it has not been granted the status of person in legal realm. However "European Parliament has advocated to grant the legal status of "electronic persons" to "autonomous robots" for the purposes of protection under copyright law"{Philip, 1957 #126}.

When it comes to development in Saudi Arabia Jurisdiction, "It is also noteworthy that Saudi Arabia has granted citizenship to an AI humanoid robot, Sophia in 2017. Dr. David Hanson, who created Sophia writes in his paper titled "Entering the Age of Living Intelligence Systems and Android Society" that looking at the progress in AI, there will come a tipping point where robots will awaken and insist on their rights to exist, to live free, and to evolve to their full potential". This also means that they will be claiming intellectual property protection with respect to Intellectual Property Rights (hereinafter as "IPRs") they will create. According to him, "advanced robots will have the right to marry, own land and vote in general elections by 2045{Ahuja, 2020 #124}.

Similarly the instance of AI, holding any human being responsible for infringement of copyright of work generated autonomously by AI, yet remains to be answered.

How would one hold AI responsible for copyright infringement incase if AI generates content similar or substantially similar to human-created work, is again another problem to be considered while dealing with infringement in the realm of AI.

Another stance regarding AI authorship is the categorization of AI-generated content in the public arena {Ahuja, 2020 #125}, accessible free of cost to the public. Since no cost is incurred while generating AI content and the fact that AI generates the work based on billions of reports available to it at the hands of humans, therefore AI needs not be granted authorship. "The AI, being non-human does not require any such motivation to create the work"{Philip, 1957 #126}. The said line depicts the fact that AI needs no incentive the way human authors do.

The said stance may have its own weightage, "One should however, also consider the fact that if there is no protection to AI-generated works and the public is free to make use of such work without any authorization or paying any fee, it may turn out to be a death knell for those companies which invest a huge amount in the AI system to generate these works. Smart people will start commercializing such works in various ways without incurring any cost and compete with companies which invested the money. Therefore, some protection may be needed for AI-generated works to encourage the AI programmers and the companies which may work as a stimulus for them to continue investing in the AI related R&D activities{Samuelson, 1985 #127}.

V, Analysis of case law and statute

Shenzhen Tencent v. Shanghai Yingxun 2019, Based on AI assistance created content{Lee, 2021 #128},

In the instant case, Beijing Tencent (Shanghai Yingxun) is the defendant and Shenzhen Tencent is the plaintiff. Brief facts of the case are that Beijing Tencent developed software called Dreamwiter, an algorithm-based intelligent writing assisting system. Beijing Tencent licensed the said system to the plaintiff. Shenzhen Tencent, making use of the system, generated an article with the assistance of the machine mentioned above.

The defendant, Shanghai Yingxun, without the permission of the plaintiff, published the same article on their website. Shenzhen Tencent being aggrieved took the matter to the court on the grounds of copyright infringement. The Nanshan District People's Court of China based its decision on Article 11 of the Chinese Copyright Act of 2010.

Nanshan District People's Court decreed that the plaintiff in the instant case holds the copyright even though the plaintiff generated the content with AI software assistance. The court based its decision on Article 11 of the Copyright Act of China 2010, stipulating the Dreamwriter intelligence software was prompted by the team of the plaintiff, the topic was chosen by the said team and the article reflects the needs and intentions of the plaintiff, therefore Shenzhen Tencent is the rightful owner the article in hand.

Thus above discourse makes vividly clear that the Chinese Copyright Act of 2010 grants ownership of the AI-assisted work to that person, under the supervision/instructions of whom the AI created the work. Long story short, in Chinese jurisdiction, a person creating work with the assistance of AI tools, he is likely to own the copyright of such work in light of Article 11 of the Chinese Copyright Act of 2010. However, it is pertinent to mention that there is no single case provision or case law in China that deals with the work independently or autonomously generated by the AI itself. It has been observed"In the United States also, the author of a work which is created with the help of AI may have copyright if he/she establishes that the AI program was used as a tool/medium in the creation of the work"{Hristov, 2016 #129}.

Comparative legal framework for AI innovation

The UK has been the first jurisdiction to have brought flexibility to copyright laws, dating back to 1988 in the realm of artificial intelligence {Sun, 2021 #130}. Section 9 (3) of the Copyright Designs and Patent Act 1988, capacitates the said flexibility for future technological advancement. The section stated above, grants the copyright of computer-generated work to the person whose instructions made the computer generate such work {Carty, 1989 #131}. The term computer-generated in the instant case is associated with AI-generated work.

Copyright law review committee report on computer software protection opined to add a similar provision (necessary arrangement test mentioned in the UK copyright act), in the Copyright Act of Australia but the said recommendation was not materialized in the Australian Copyright Act{Bainbridge, 2019 #132}.

When it comes to the American jurisdiction stance on copyright laws in the realm of artificial intelligence, one must not overlook the informal legislation in America, the National Council on the Use of New Technologies in Copyright Works, CONATU, in a published report of 1978, recommended the authors of artificial intelligence works to be given the authorship but not the artificial intelligence itself. Several other countries including Hongkong, India, New Zealand, and Ireland have adopted similar or identical stance as that of the Uk (necessary arrangement test) for identification of authors in computer-generated works or AI-assisted work{Bainbridge, 2019 #132}.

VI. Legal Transplant as Theoretical Framework

The contemporary methodologies being followed in most of jurisdictions show the authorial attribution to the person overseeing the AI-driven processes. However, the Chinese copyright model and the UK model seem to be more practicable and may contribute to positive outcomes if transplanted into Pakistan Copyright law in the realm of artificial intelligence.

UK provision 9(3) seems defective enough at very first glance, “the author shall be taken to be the person by whom the arrangement necessary for the creation of work are undertaken”, creates myriad questions in mind, whether the authorship shall be granted to the coder of the AI software, or the person operating the AI-based software or the companies investing in AI technology because the said instances could be derived from the word “necessary arrangement”. The above-inferred situations seem to be capacitated in the words “necessary arrangements”. Considering this standpoint, one may infer the said provision to depict flawed legislation.

Nevertheless, the same flawless characteristic of the said provision might be interpreted as an opportunity in the absence of rigid interpretation, therefore showing ample flexibility. Since the words “necessary arrangements” have no fixed meaning, the court may grant authorship in AI-assisted work depending on case-to-case scenarios. This flexible nature of UK copyright provision is desirable in the realm of artificial intelligence that is still emerging.

Pakistan may draw its inspiration from Article 11 of the Copyright Act of China, where authorship is granted to an individual successfully establishing the claim that AI was merely used as a tool for generation provided that the generated work depicts the intention and needs of that individual, however, the Chinese provision seems to be less flexible when compared to more adaptable UK provision 9(3) in the ambit of AI.

VII. Recommendations

Artificial intelligence AI is changing rapidly, which poses big challenges for copyright law. To tackle these challenges effectively, policymakers, legislators, as well as legal professionals ought to take into consideration below mentioned suggestions

Define terms clearly: it's crucial to clearly define terms like machine learning, neural networks, as well as algorithm generation with copyright laws. This will help avoid confusion and provide a solid basis for dealing with AI-related issues in copyright law.

Rethink originality: we need to reconsider what it means for content to be original when it's generated by AI. Even though it is often based on existing material, AI-generated content can have unique aspects that deserve recognition and protection under copyright law.

Decide on Authorship: policymakers must decide whether AI system can own Copyrights or if rights should go to the people who operate, develop or use the AI. Another option could be to create a new category of rights specifically for AI generated works.

Set Copyright Duration: Given that AI doesn't have a human lifespan, we need to establish a fixed duration for copyright protection for AI-generated content. This will ensure fairness and consistency in how such works are treated.

Adapt Moral Rights: Moral rights, especially in places that give them a lot of importance, need to be adjusted to fit the context of AI. This means recognizing that AI lacks emotions or intentions and adapting moral rights accordingly.

Encourage Global Cooperation: Because AI has a global impact, it's important for countries to work together to standardize copyright laws and address issues related to AI-generated content. Collaboration will make it easier to manage and protect intellectual property rights effectively.

Invest in AI Tools for Copyright: We should invest in tools that use AI to detect potential copyright violations, especially those involving AI-generated content. These tools can help identify and address violations more efficiently, protecting the rights of creators and copyright holders.

Educate Legal Professionals: Legal professionals need ongoing education about AI and its implications for copyright law. Workshops, courses, and seminars can help them stay up-to-date on AI technology and its impact on copyright.

Consider Ethical Implications: It's not just about the law—there are ethical considerations too. Regulations should promote fairness, transparency, and respect for creators while encouraging innovation in the digital world.

To conclude, dealing with AI impact on the creative world requires a proactive, informed, and collaborative approach to copyright law. By clarifying terminology, rethinking in originality, Addressing authorship and duration, adapting moral rights, promoting global cooperation, investing in AI tools, educating legal professionals, and considering ethical implications, policymakers can ensure that copyright law remains relevant and effective in the age of AI.

Conclusion

The expanding role of AI across all sectors heralds a future where its pervasive presence in our daily lives necessitates regulatory oversight, particularly in intellectual property rights such as copyright. The challenges surrounding authorship and ownership of AI-generated works underscore the urgent need for international consensus and legal frameworks. While no

perfect solution exists, efforts by organizations like WIPO are crucial in navigating this complex terrain. A balanced approach, perhaps through a sui generis system or tailored provisions within copyright laws, must prioritize human creativity while acknowledging AI's contribution. As AI technology evolves, the intersection with IP rights demands ongoing legal adaptation and international collaboration to ensure ethical and economically viable frameworks that foster innovation while protecting rights in a globally interconnected landscape.

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