THE LEGAL PROTECTION OF ARTIFICIAL INTELLIGENCE-GENERATED WORK: THE ARGUMENT FOR *SUI GENERIS* OVER COPYRIGHT

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Abstract

Artificial intelligence (AI) is the simulation of human intelligence processes by machines, especially computer systems. As with other elements of society, the modern economy has become more reliant on AI, indicating the potentially great influence it has on innovation. Many previous studies on the status of AI-generated work have focused on its connection to intellectual property (IP) law, mainly under copyright and regulations, and whether this type of work could be protected within the legal framework of copyright. Therefore, an all-inclusive assessment of the fitness of the existing copyright law framework is necessary. While recent discussions have mostly considered AI-generated works. In this paper, we examine AI within the context of the international legal framework of IP rights, the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement), and national legislation. We conclude that current copyright law is unsuitable for the protection of AI-generated works and that *sui generis* is a better option. However, the future legislative path should be specialized legislation addressing not only AI-generated works but also the prohibited acts that might create certain risks for industries. The research adopted a comparative analytical in-depth examination of the international legal framework of intellectual property law.

Keywords: Artificial Intelligence-Generated Work, Intellectual Property, Copyright, *Sui Generis*, TRIPS, National Legislations

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1. INTRODUCTION

The concept of artificial intelligence (AI) is not novel as the term was defined in the mid-1950s by McCarthy et al. (1955) as the science and engineering of making intelligent machines. Following its evolution, AI can be further defined as "activities that we associate with human thinking, activities such as decision making, problem solving, learning, creating, [and] game playing" (Bellman, 1978, p. 3). The current applications of AI range from natural language processing, speech recognition, expert systems, and machine vision, algorithms that can apply the same steps as a person writing at a computer (Castets-Renard, 2020; Manning, 2020), and robotics. In the latter area, AI systems not only

work at the software level but also in a virtual world integrated into hardware. Indeed, a 2019 World Intellectual Property Organisation (WIPO) report on technology trends revealed the increasing amount of research on AI, especially scientific research since 2013. This progressive evolvement of AI and its contents such as AI open sources (AI OS), deep mining (DM), and deep learning (DL) is related that falls within generative AI among the various sectors. AI is involved in heavily various industrial, trade, and technological sectors. This is highlighted by the draft attempts for specialized AI legislation as shown in the European Parliament members' negotiations to draft an AI Act on June 14, 2023 (Lopez, 2023).

The role of AI has also had a significant impact in other areas such as culture, art, literature, and music (Szczepański, 2019). With this growing understanding of the adaptability of AI and the concomitant escalation in its applications, its different objective uses have come under scrutiny. AI as a technical terminology was properly addressed in the mid-fifties of the previous century. McCarthy et al. (1955) at the end of a two-month period workshop defined "artificial intelligence" as a term.

The paper is supposed to answer certain research questions:

RQ1: Is the current intellectual property (IP) rights legal framework (copyright) the most suitable for AI-generated works that could be copyrighted?

RQ2: How successful has the traditional IP legal framework (copyright) been as a method of protection?

RQ3: Is there an urgent need for a novel form of protection?

The reasoning behind such questioning relies basically on the actual understanding of AI's relationship with IP. Identifying a possible alternative IP legal framework or more of an intertwining hybrid legal protective system.

However, the aim of the paper and its reasoning is the extremely expanding use of AI in the various fields of life. This overuse of AI created legal and judicial complex issues regarding the implications of the applicable law and suitability of the current copyright legal system to provide efficient protection. Originality is considered among the main criteria of copyrighted works which includes a certain human element. The more modernized forms of AI create and reproduce music, images, and certain voices (deep fake), for example, *Heart on My Sleeve*, which was claimed to be authored by Drake, etc. Among many unsettling issues, the copyright and the publishing/production industry failed to handle.

AI technologies' significance as an intangible assists requires protection similar to computer programs and data software that is protected within the IP legal framework while AI lacks such a clear-cut mechanism. A suggested more balanced IP protection system that provides enough valid incentives for AI. The main finding of the paper concluded that the current IP rights shortcomings most obviously copyright as AI-generated works do not meet the minimum required standards of copyrighted works. While *sui generis* is a more suitable current solution the future requires a more reliable legislative solution via specialized precis law

that provides clear-cut responses to up-to-date problematic AI issues.

The rest of this paper is structured as follows. Section 2 reviews the literature and addresses the complex relationship between AI and IP. Section 3 provides the research methodology. Section 4 presents the main results. Section 5 discusses the artificial intelligence and intellectual property relationship. Section 6 concludes the paper.

2. LITERATURE REVIEW

In the literature, the understanding of AI and its various applications has focused on its connection (or lack of one) with IP law, with studies tending to examine elements of AI within the IP legal framework regarding their protection under existing IP regimes. There is a question concerning how AI-generated works of art, music, literature, or drama should be protected, such as via copyright or an alternative, and views vary on the appropriate method. For example, this could be via an IP rights legal framework as a whole or an approach that considers instances more individually. Regardless, several attempts have been made to provide more uniform coverage, given the evolving nature of AI-generated works and their link to large-scale industries via scholars and international legislative IP frameworks. The IP international framework has introduced a connection between legal norms and AI. Here, intelligence refers to a machine's ability to imitate the cognitive functions associated with the human or animal brain, i.e., the ability to learn and solve problems. According to Russell and Norvig (2016), this may involve thinking or acting by imitating human behavior (a cognitive approach) or rationality (a computational approach). Therefore, the IP legal framework of protection must take many areas and factors into consideration in the international attempts to address the role of the most suitable legal protection system that could provide the most reliable, most accurate legal judicial safety net protection within WIPO (2019) and WIPO (2021) reports. Even though the subject matter of the research has been addressed previously, however, such studies have not tackled it comprehensively. Gervais (2021) addressed the connection between AI and IP. He referred to the position of the European Union (EU), and he argued in detail the stance of the TRIPS Agreement and efforts of WIPO stating the approach towards AI within IP rights current legal framework various contents should cover certain aspects of AI (copyrights, trademarks, trade secrets, and *sui generis*). Although it provides a current solution for day-to-day issues, it is not tackling the progressive speedy impact AI has on various aspects of modern life and its sectors either industrial, arts, and literature. Many voices address the need to protect the investments that are introduced in AI involving various economic sectors. As noted in the WIPO (2019, 2021), among those who identified copyright IP legal assets suitable to address AI-generated works (Al-Sharieh, 2021) who addressed the issue of sticking to traditional norms of legislative discourse that AI can be tackled within computer programs therefore, copyright should address the issue, in which, the current Federal Law concerning Copyright and Neighboring Rights of 2021 shall be sufficient to

protect innovative creations of authors. The author reduced the human element within AI-generated works to a minimum to include AI within the range of copyright protection. In addition, the approaches undermine the position of copyright as a method of protection for AI (Zurth, 2020). The UAE Federal Law concerning Copyright and Neighbouring Rights has not addressed vividly any AI-related provisions and the legislative gap could be covered by such related provisions, which do not provide any legal background for a copyright AI legal framework, yet could be on the footsteps of the UK regarding the protection of AI via copyright system historically and through AI national strategy. As the UK legal system was among the leading legal systems that included computer-generated works within copyright, these so-called "entrepreneurial works" do not need to be original (Intellectual Property Office, 2022). It has been addressed within subsection 5.4 of this paper within the UK Copyright Industrial Design and Patents Act 1988. In addition, there have been certain approaches that AI systems must perform actions on works protected by copyright, such as reproduction, and text and data mining (TDM) (Marzetti, 2022). Its representation of legislative documents addresses the TDM[1] of large quantities of copyrighted papers to say that AI systems could be copyrighted. To claim AI-generated works are protected via copyright legal system the TDM is to be based on material and literature protected by copyright. Even though, such perspective that copyright classical legal framework fails to meet the progressive evolvement of AI-generated works does not reach its inability to identify or address the related industries copyright that lately showed a lack of connection with the industries that may be involved has played a significant role in setting a certain legal system suitable for protection via the most related to the subject matter. It has to be stated that even though computer-generated works were addressed straight forward via the UK Copyright Industrial Design and Patents Act 1988, the issue of original computer-originated works drew criticism due to human nature; originality, personality that is an important factor of copyrighted works authored via humans (Intellectual Property Office, 2022).

Even though this approach provides certain legitimacy for copyright as a system was not entirely complete since various recent judicial applications have addressed that human element requirement may not be available regarding AI system being an author as the US Court of Appeals conformed *Naruto v. Slater* (2018), even though the case was not directly related to AI, it handled the human element could be applied on the AI system and authorship of copyrighted works.

3. RESEARCH METHODOLOGY

The impact of the pharmaceutical industry's intellectual property especially patents on the subject matter is studied. The research adopted a comparative analytical in-depth examination of the international legal framework of IP law in

general and patents per se. The role of IP leading international instruments (WIPO, 2019) continued in more recent events administered by WIPO (2021).

The research adopted a comparative analysis of the provisions of national and international legislative documents to approach a novel evolving subject matter that impacts a significant sector that has not been previously addressed in depth. Such comprehensive examination would shed light on the legislative judicial experiments that would assist the authors in reaching the findings needed to solve future issues that may arise.

4. RESULTS

An in-depth examination has covered various elements of IP, copyright, patents, trade secrets/undisclosed information, unfair competition, and *sui generis* as a legal protective framework for the AI sector. The paper has highlighted that IP entities have provided elements of protection to certain parts effectively, but also that there are certain flaws within the IP legal framework, not least that some IP protection attempts of specific aspects of AI are ineffective. The more suitable approach addressing the most successful method of protection taking into account the nature of AI is rapid involvement in various industries (publication, music, etc.); the path forward for policymakers.

The in-depth examination of the previous studies of the subject matter under study as well as various legal frameworks and judicial provisions (national and international) have shed light on the shortcomings of the current copyright legal framework. However, an urgent need for massive/drastic amendments to the copyright legal framework to adapt to the speedy progressive AI development and its involvement in modern industries has its connection to a more adaptable copyright law. Or more suitably, as reached in the conclusion, precise separate legislation that tackles the AI–IP conflicts or harmonizing aspects of discourse.

5. THE ARTIFICIAL INTELLIGENCE AND INTELLECTUAL PROPERTY RELATIONSHIP: CONFLICT OR HARMONY

The connection of AI with an IP rights regime concerns, the role AI may have regarding the management of IP in general and the role the IP regime may have in the protection of AI; that is, what is the influence of AI on IP, and vice versa? The resolution of this question is a key objective of an IP policy that seeks to kindle innovation and creativity in economic and technological areas. Here, AI and IP overlap. Another factor to consider is that certain aspects of AI may be protected by more than one IP law.

However, in terms of the applicability of copyright law to AI-generated works, there are questions regarding whether it can efficiently protect such works. While AI apps can independently produce literary and artistic works, this ability may not fit the copyright system, which is closely connected to human creativity and respects and rewards the human creative process. The main question here is whether copyright should be attributed to original literary and artistic works

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[1] "Text and data mining (TDM) is the use of automated computational techniques to analyse large amounts of information to identify patterns, trends and other useful information... TDM usually requires copying of the material to be analysed" (Intellectual Property Office, 2022).

autonomously generated by AI, or whether a human creator is required (George & Walsh, 2022). Indeed, those aspects of AI that can be distinguished under conventional IP protection in the classic form of copyright may not enable AI to be comprehensively protected under IP rights. An algorithmic "author", it seems, is framed differently in these two legal areas, with differently disruptive results. This illustrates the importance of legal context in the description of AI from a legal perspective, in that it must be supported by the main IP legal system in terms of whether the algorithmic author/inventor can be framed within copyright law or patent law, generally speaking.

Despite the positive outlook on the IP/AI interconnection, certain problematic issues require attention, especially regarding the ownership of a patentable invention in the patent/trademark registrar. There are questions about the ability of the present legal IP regime to manage particular aspects of AI-generated works, and whether a more refined IP legal system is needed. The issue of the objective conditions/requirements of copyrighted works, including the originality or creativity of AI-produced works, raises many complex technical and theoretical matters. From the perspective of WIPO and the TRIPS Agreement, for example, a more *sui generis* system of IP rights for AI-generated inventions might improve innovation incentives for AI (George & Walsh, 2022).

5.1. Artificial intelligence within the international/ national intellectual property legal framework (copyright)

Technological AI advances are also expected to disrupt numerous legal frameworks, in that, for instance, advances in AI-generated images, art, and literature have outpaced the regular IP system. AI-based work has, until now, been focused on a small number of regions and organizations (WIPO, 2019) that seek an understanding of, and improvement in, common standards, definitions, and approaches. This commonality will lead to consistency, which will in turn generate confidence and unlock the vast global investment needed to bring AI technologies within a more evolved IP rights legal system (WIPO, 2019).

5.2. Artificial intelligence and copyright

It is reasonable, from an economic perspective, for a company to require protection for AI-generated works since huge sums are invested. Indeed, why would an investor fund a system capable of producing music for video games, only to discover that the music is not copyright protected? In addition, not providing legal protection could lead to circumvention through the failure to disclose the role of AI in the production of a work, with the human using AI being considered the author of the work and taking advantage of the legal presumption of authorship.

There is also a question concerning the extent of protection for AI-generated works within copyright law. An examination of the provisions of the UAE Federal Law concerning Copyright and Neighbouring Rights reveals there is no explicit text that can be relied upon to justify or deny such protection; rather, there are neutral texts that justify

protection, alongside others that can be relied upon to prevent such products from being legally protected under copyright.

5.3. Artificial intelligence-generated works protected by the UAE Federal Law

Regarding the aforementioned neutral provisions, Art. 1 of the UAE Federal Law No. 38 of 2021 concerning Copyright and Neighbouring Rights (henceforth the UAE Copyright Law) specifies, "Every innovative production in the field of literature, arts, or science, whatever its type, method of expression, importance, or purpose". The term "every innovative production" is a general one that includes every method of production, whether traditional or through AI, and so AI-generated works can be considered legally protected. The significance of the abovementioned text is not the mechanism of innovation or expression, but rather the result that has been reached. The law grants protection to works of unknown authorship or those that have been published under a pseudonym, as Art. 1 of the UAE Copyright Law stipulates when states that, "… whoever publishes it without a name, under a pseudonym, or in any other way…" is considered the author[2] of the work. Thus, it is unlikely to determine the mechanism of innovation and the extent of the creative aspect in the production of the work. Art. 2 of the same law determines that the protection covers musical, visual, and audio works. Therefore, any AI-generated work that falls within these categories can be copyrighted under the provisions of the law. In this context, a Chinese Court on December 24, 2019, granted copyright protection to an entirely AI-written text. The court based its reasoning on Chinese Copyright Law that requires lower human intervention to provide work copyright protection (Bo, 2019; Zurth, 2020). However, this verdict even though significant in its reasoning for the final judgment fails to justify its stance other than the provisions the Chinese below bar requirement regarding the human element represented in the personality and originality criterion. The case is actually in contradiction with a ruling of the European Court of Justice in which it unified the requirements of copyrighted works: "The author … can stamp the work created with his 'personal touch'" (SAS Institute Inc. v World Programming Ltd., 2011).

5.4. The inability of the copyright legal system to protect artificial intelligence-generated work

Despite the above interpretation, our analysis of other texts and opinions reveals that AI-generated work may be excluded from copyright protection. Those texts that may prevent AI-generated work from being covered under copyright include the abovementioned Art. 1 of the UAE Copyright Law which defines innovation[3]. In French jurisprudence,

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[2] Art. 1 of UAE Copyright Law states, "Author: The person who creates the work, or the person whose name is mentioned thereon or if, upon Publication, the Work is attributed to him as being the author thereof unless otherwise proven. Shall also be considered author, whoever publishes anonymous or pseudonymous work, or in any other manner, provided that there is no doubt as to the true identity of the Author; otherwise, the publisher or producer of the work, whether a physical or juristic person, shall be deemed as representing the Author in the exercise of his rights, until the true identity of the Author is recognised".
[3] The innovative character that bestows originality and distinction upon the work. The Emirati legislature included originality as part of the innovation.

there is the opinion that innovation requires perception or awareness; that is, it requires a minimum level of intellectual control over the process of bringing the work into existence, or that the author has the ability to modify or even delete the work. It is impossible to imagine a creative process without the authors realizing what they are doing. Although this analysis is accurate theoretically, the reality is relatively different because the judiciary does not pay attention to the mental and cognitive state of the author when protecting the work; rather, protection can be granted to a work produced by mere chance. In the UAE Copyright Law, the author is defined as "the person who creates a work" and a person is "a natural or legal one". Thus, a robot or AI cannot in general be considered a natural or legal person according to UAE legislation and therefore cannot be an author according to the provisions of this law.

However, it should be noted that AI was granted legal personality by the European Parliament in 2017, considering that it is possible to grant special legal personality to the most complex robots to grant compensation to those who created them, and not to grant the AI-generated works of these machines authorial status (European Parliament Resolution of 16 February 2017 with recommendations to the Commission on Civil Law Rules on Robotics, 2017). Such work follows the provisions of copyright law and the decision only gives deep learning AI machines legal personality, not all AI machines. Many comparative legislations have taken the same approach in not recognizing authorship for anyone but a natural person or for clear and present human involvement in the process of authorship. For example, the US Copyright Office recently rejected an application to grant a digitally created image (Growcoot, 2023) on the grounds of lack of human involvement in its authorial process. The Office stressed that "The term authorship implies that, for a work to be copyrightable, it must owe its origin to a human being" (Compendium II of Copyright Office Practices, 1984, Section 202.02(b)).

This position is neither singular nor novel. The Australian Supreme Court preceded the US Copyright Office in not granting an AI-generated database authorial status (IceTV Pty Ltd v Nine Network Australia Pty Ltd., 2009)[4]. Indeed, this was not the first instance of the Australian Court's stance, since in *IceTV Pty Ltd v Nine Network Australia Pty Ltd.* (2009), it stated the requirements for recognizing copyrighted works. The "Federal Court recognized that to be original, a work must: 1. Not be copied; 2. Originate from a human author; and 3. Be the result of independent intellectual effort" (Lindsay, 2012). Moreover, the Court found that the extraction phase effort did not originate from an individual or group of individuals, but rather from a computerized process. The French Judiciary have taken the same approach as the French Court of Cassation, which stated that "a legal person cannot be an author" (*Case No. 13-23.566*, 2015) and so, in other words, authorship is not granted to anything but a natural person.

What hinders AI-generated works from being granted authorial status is the inability to grant these works independent financial rights, such that they can receive the financial royalties that arise. With these rights, questions arise as to whether the machines can independently exercise moral rights, or can decide to publish, withdraw from circulation, or modify a work, or indeed object to a modification that distorts or misrepresents the work or damages the reputation of the "author", as stated in the Art. 5 of the UAE Copyright Law. Likewise, the UK Copyright Industrial Design and Patents Act 1988 adopts a similar approach in Section 9(3), which provides that the author of a computer-generated literary, dramatic, musical or artistic (LDMA) work, "shall be taken to be the person by whom the arrangements necessary for the creation of the work are undertaken". The approach of accrediting authorship to LDMA work when there is no human author has been followed in a small number of other jurisdictions but has otherwise remained somewhat underwhelming since no further UK provision has been made for over 50 years.

The concept of copyright becoming a more elaborate protection system may thus be entwined with both the evolution of AI and the impact of a more comprehensive understanding of how to evolve the IP system and related literature. This is especially so regarding the issue of code sourcing and data, in which certain IP frameworks take a forward approach (WIPO, 2019), while others have a *sui generis* protection system (Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the Legal Protection of Databases, 1996).

5.5. Intellectual property international framework, artificial intelligence, World Intellectual Property Organisation, and the European Union perspective

To meet the needs of the international marketplace, an effective mechanism for the protection of IP rights must be established, preferably multilaterally but if necessary through regional and bilateral arrangements (Doane, 1994). The TRIPS Agreement has taken a more direct approach to copyright (WTO, 1994), and EU directives on database legal protection (Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the Legal Protection of Databases, 1996) and harmonization of certain aspects of copyright and related rights in the information society (Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the Harmonisation of Certain Aspects of Copyright and Related Rights in the Information Society, 2001) have also clearly addressed copyright. Directive 96/9/EC of the European Parliament and of the Council explicitly deals with issues related to database protection by stating that certain aspects of databases require more protection than copyright, and in so doing it leans more heavily toward *sui generis* for certain technical aspects. In the UAE, the concept of IP and AI is addressed in the IP legal framework in the provisions of TRIPS Art. 10(2) on

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[4] A database is defined according to the EU Directive on database legal protection (Directive 2001/29/EC of the European Parliament of the Council of 22 May 2001 on the Harmonisation of Certain Aspects of Copyright and Related Rights in the Information Society, 2001) as "a collection of independent works data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means".

Data Compilations[5] (WTO, 1994). It should be noted that the TRIPS Agreement provides that gatherings of data and other material essentially must be protected "as such". While it is not said that these compilations must be protected as works, this can be assumed since the provision appears in that part of the TRIPS Agreement which deals with copyright (WIPO, 2012). The traditional perspective towards AI and IP has evolved especially the stance of WIPO conversations on trends in technology and artificial intelligence in 2019 and 2021, respectively. This approach led to addressing the main issue related to the traditional IP rights legal system, especially copyright shortcomings regarding sufficient protection within the current copyright system leading to seeking alternative solutions.

5.6. Alternative solutions

The failure of current copyright law to protect AI-generated works sufficiently has, from one perspective, led to the call for drastic change via the introduction of a new copyright system, while those of another view favor *sui generis* protection (Woodward, 1996). These opposing views will be discussed next.

5.7. An altered copyright system

The copyright system could address AI-generated works within a special legal system similar to the copyright legal framework approach used for computer programs and database protection. However, this means that originality must be present in the AI work. Originality in this situation is closer in nature to the concept of novelty. Although the AI engine may not recognize the final product of the generated work seeking protection, it controls the final AI-generated work (Ginsburg, 2018; Craig & Kerr, 2021). Also, AI-generated works should be registered as normal copyrighted work as is the case in certain legislations such as Art. 4 of the UAE Copyright Law. This process may reduce the possibility of identical or very similar works and thus any infringement, as AI-generated works are not human-based. As for the issue of material rights, provision could be made to include the original creator (investor) of the AI machine (Hazelwood et al., 2018).

5.8. *Sui generis*

Many comparative and related legislations assume that the most suitable method of protection for a database lies in protecting investors' rights (Bensamoun & Loiseau, 2017). Art. 341(1) of the French Intellectual Property Code (1998) defines the producer of a database as "the person who takes the initiative and the risk of the corresponding investments". This could be applied to AI-generated works as *sui generis* could easily be adapted with copyright law since it does not require any modifications or exceptions. The concept of investment should be broadly defined and

the threshold of substantiality set low (Derclaye, 2008). The concept of identifying investment is particularly easy to meet because the required investment has been interpreted as not having to be actually "substantial", as noted by the world expert in the field in *The British Horseracing Board Ltd and Others v William Hill Organization Ltd.* of 2004 (Noto La Diega, 2019a).

The concept of applying *sui generis* to AI-generated works could be built on the provisions of the EU Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the Legal Protection of Databases (1996) which recognizes that "[d]atabases are a vital tool in the development of an information market" (para. 9), based on protecting investment in the IT industry. The possibility of implementing *sui generis* on programs that may not fall within the provisions of Directive 96/9/EC (e.g., Ryanair Ltd v PR Aviation BV, 2015) means that the non-applicability of an AI-generated work may undermine investments, as mentioned. For AI-generated works, it may be that a more suitable form of *sui generis* is one entirely based on Directive 96/9/EC of the European Parliament and of the Council as a singular protection system. Thus, *sui generis* protection, with a reduced term of protection and mandatory and binding fair use provisions, should be explored for original literary and artistic works autonomously generated by AI, as argued in (Noto La Diega, 2019b).

6. CONCLUSION

The rapid progress of AI-related works requires that a stronger connection be forged between IP as a supportive legal framework and modern economic, industrial, scientific, and artistic life. Indeed, the progress of AI is leapfrogging legal systems, and the closest adaptable legal system is represented in the attempts of WIPO to bridge the gap (George & Walsh, 2022). Our in-depth examination has covered various elements of IP, copyright, patents, trade secrets/undisclosed information, unfair competition, and *sui generis* as a legal protective framework for the AI sector. The paper has highlighted that IP entities have provided elements of protection to certain parts effectively, but also that there are certain flaws within the IP legal framework, not least that some IP protection attempts of specific aspects of AI are ineffective. The paper has also tackled how AI-generated works are progressively evolving at such a rate that the traditional IP legal framework cannot keep up, despite the advanced role of WIPO regarding the more comprehensive understanding of the AI sector. What is needed is the development of the current IP legal framework, or a more evolved international IP system, such as a new IP–AI treaty that takes into consideration the evolved copyright system, investors/investment, and the immense impact that AI-generated works have on related industries. It is our opinion that the role of Directive 96/9/EC of the European Parliament and of the Council in protecting AI works and safeguarding investments will lead to the creation of a specialized *sui generis* that is closer to the nature of copyright.

A more balanced legislative effort that addresses the possible problematic issues generative AI may create for the main actors within the copyright system (authors and publishers) has

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[5] "Compilations of data or other material, whether in machine readable or other form, which by reason of the selection or arrangement of their contents constitute intellectual creations shall be protected as such. Such protection, which shall not extend to the data or material itself, shall be without prejudice to any copyright subsisting in the data or material itself" (WTO, 1994, Art. 10(2)).

not been addressed fully within copyright or patent legislation. Such legislative effort or a certain protective approach *sui generis* provides policymakers with solutions for undisclosed AI-generated/authored works leading to confusion concerning identifying the authorship issue. A precise legislative solution AI document might be the path for the future as *sui generis* can act currently as a link-up solution that protects to cover the gaps that the main assists of the current IP framework to handle the rapid progression of AI, its entanglement with various aspects of life, industry, trade, or otherwise.

In conclusion, the current IP system barely handles AI evolvement at the moment due to the intervention of *sui generis* or trade secrets to address AI issues copyright and patent requirements, copyrighted originality criteria or patentability, creativity, or inventive-step may not address.

The future legislative path should be specialized legislation addressing not only AI-generated works. Moreover, the prohibited acts might create certain risks for individual users or industries (*Heart on My Sleeve* song) that impact the producer negatively or any other socio-economic outcomes.

The implications of the subject matter are related to a progressively evolving technological topic under the current normative IP framework which has been proven insufficient to tackle the AI-generated works properly. Therefore, the legislatures' efforts to draft separate legal documents that address AI precise individual laws are a matter of time in the near future.

The limitations that faced the research lie in reality, not in the lack of recent literature review in certain eras in the field or subject matter in individual of the subject matter understudy. The classical form of IP legal/legislative/judicial has not addressed AI and its speedy progression in various aspects and sections of life. It was only recently that global studies and conferences began to address IP as a whole comprehensive protection system. The hesitation in addressing the subject matter in the most appropriate IP assist that may be the most suited. The gap in the literature review of precise legislative documents which has only recently a significant regional international legislature (European Parliament) addressed and AI separate draft or utilizing the *sui generis* legal framework, instead of the usage of the classical IP legal framework that is lacking in certain aspects.

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