THE INTERSECTION OF INTELLECTUAL PROPERTY LAW AND ARTIFICIAL INTELLIGENCE: EXAMINING THE OWNERSHIP OF AI-GENERATED WORKS IN NIGERIA

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Abstract

The swift development of artificial intelligence (AI) has brought new complications into the legal landscape of intellectual property (IP) law, particularly concerning authorship and ownership rights over AI-generated works. With the proliferation of AI systems capable of creating art, literature, music, and inventions, questions arise about a number of legal and ethical issues. One of such issues concerns the ownership of intellectual property (IP) rights to such works. Adopting a doctrinal approach, this paper analyses the legal architecture governing authorship and ownership of IP in Nigeria. It further identifies the challenges posed by AI-created works and assesses the applicability of the Copyright Act 2022 together with other relevant legislation. Additionally, this paper explores an inter-jurisdictional comparative study of the legal terrain in jurisdictions like the United States, the United Kingdom, Germany and the European Union (EU) to appreciate their approaches to this subject. Emerging issues here arise on whether AI can be considered as an author or inventor under existing laws, the rights of developers and users of AI-generated works as well as the feasibility of achieving a global legal consensus on the subject. The paper finds that the traditional property law frameworks which recognize authors and inventors as natural persons do not contemplate works autonomously created by non-humans, thus leaving a regulatory vacuum. It concludes with recommendations for Nigerian legislators on how to address the advancement of AI in the creation of works.

Keywords: AI-Generated Works, Artificial Intelligence, Authorship, Intellectual Property Law, Ownership Rights.

1.0 Introduction

Artificial intelligence (AI) is commonly defined as the simulation of human intelligence processes by machines, particularly computer systems.[1] In modern parlance, it concerns the ability of a machine to communicate, reason and operate independently in both familiar and novel scenarios

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[1] Lev Craig, Nicole Laskowski and Linda Tucci, "What is AI? Artificial Intelligence explained" Search Enterprise AI, n.d.) https://www.techtarget.com/searchenterpriseai/definition/AI-Artificial-Intelligence accessed 15 May 2025.

in a similar manner to a human.[2] It has been characterised by Google Cloud as technology that enables machines to generate, classify, and analyse data while improving performance over time through "training" on large datasets.[3]

The use of AI systems has transitioned from mere theoretical constructs to real-life practicalities that significantly impact processes across various sectors. AI systems, now capable of swiftly generating works without direct human intervention, have become more sophisticated and capable of adapting human imagination into works that cannot be differentiated from actual human output.[4] AI software like OpenAI's DALL·E, DeepMind's AlphaCode, and Jukebox by OpenAI are apt examples of AI systems which create paintings, computer codes, and music pieces, respectively.[5]

These developments indicate a paradigm shift in the creation of works for all who elect to exploit them not just as a tool for augmenting human creativity but also as an independent agent creating standalone works. This innovation, it seems, has become the new *best thing after sliced bread*. However, the flipside of this *innovative coin* is that it inexorably raises pertinent questions concerning authorship and ownership of such works.

Intellectual Property (IP) has been defined by the World Intellectual Property Organization (WIPO) as legal protection for intellectual creations in the form of inventions, literary and artistic works, designs, and symbols, names, and images used in trade.[6] The intellectual creations are

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[2] Du-Harpur X, Watt FM, Luscombe NM and Lynch MD, 'What is AI? Applications of Artificial Intelligence to Dermatology' (2020) 183(3) *British Journal of Dermatology* 423–430 https://doi.org/10.1111/bjd.18880.

[3] Google Cloud, "What Is Artificial Intelligence?" (Cloud Learn, n.d.) https://cloud.google.com/learn/what-is-artificial-intelligence accessed 10 May 2025.

[4] 'On the Possibilities of AI-Generated Text Detection' (2023) arXiv:2304.04736v3 [cs.CL] https://arxiv.org/abs/1802.07228 accessed 10 March 2025.

[5] OpenAI DALL·E (Instagram account), Available at: https://www.instagram.com/openaidalle/ (accessed March 13, 2025); MidJourney Artwork (Instagram account), Available at: https://www.instagram.com/midjourneyartwork/ (accessed March 13, 2025).

[6] WIPO, "What Is Intellectual Property?" (WIPO, n.d.) https://www.wipo.int/en/web/about-ip accessed 15 May 2025.

treated as property so that their creators have the control and the right to capitalise on their use. These property rights and their protection grant human creators exclusive, time-limited rights over specific subject matter within defined territories, thereby enabling control and commercialisation of inventions and works.[7]

IP laws, which were designed to protect human creativity and innovation, now face what is arguably its greatest challenge ever. On the first leg, the assumption that intellectual output originates from a human author has been enshrined in legal frameworks for centuries.[8] Under the Nigerian copyright framework, the interpretation of an "author" in the context of different works relates to a person doing some action necessary to the creation of the work.[9] However, the proliferation of AI-generated works, which may be produced with minimal or no human input, challenges these well-established principles. It is indeed a nascent legal challenge which calls for legislative and judicial attention.

It must be acknowledged at this point that the architecture of Nigeria's legal framework for the protection of IP has undergone a recent significant reform with the enactment of the Copyright Act 2022.[10] The Act represents a landmark development in the Nigerian laws governing copyright regulation, updating laws to reflect contemporary technological advancements in different industries. However, despite its improvements, the Act, like many of its global counterparts, primarily contemplates human authorship. AI has therefore generated complex legal and ethical challenges for IP law that traditionally vests authorship and ownership in natural individuals. This

[7] CreativeFuture, "Rights and Intellectual Property" (CreativeFuture, n.d.) https://www.creativefuture.org/creativity-toolkit/rights-and-intellectual-property/ accessed 15 May 2025

[8] Article 2 of the Berne Convention for the Protection of Literary and Artistic Works defines "literary and artistic works" and includes various forms of intellectual output such as books, lectures, musical compositions, and more, which are typically created by human authors.

[9] See, s.108 (1) of The Nigerian Copyright Act 2022.

[10] I.A Adedokun, 'The Copyright Act 2022: A New Dawn for Online Creators in Nigeria' (2023) *Journal of Private and Property Law, Rivers State University,* vol. 20 (1), pp 43-52 at p.50.

anthropocentric stance creates a regulatory vacuum when AI machines autonomously produce art, literature, music, or inventions without significant or any human input. It therefore raises fundamental questions about who (if anyone) is the "author" or "owner" under existing IP law.

Consequently, the central research problem of this paper is to explain how Nigerian IP laws currently respond to the legal and ethical problems of assigning ownership to non-human authors and to assess whether comparative lessons from the United States, the United Kingdom, and the European Union (EU) can inform legislative or judicial reform in Nigeria. The study looks at statutory definitions of "author" and "owner" within the Copyright Act 2022 and Patents and Designs Act, evaluates relevant Nigerian case law, and scrutinises foreign case law in an effort to determine how such jurisdictions have treated AI-generated output.

2.0 Understanding AI-Generated Works and Ownership Rights

2.1 AI-Generated Works

Generative artificial intelligence (Gen-AI) is a subset of AI that uses generative models to produce text, images, videos, or other forms of data.[11] These models learn the underlying patterns and structures of their training data and use them to produce new data[12] based on the input (which often comes in the form of natural language prompts).[13] AI-generated works therefore encompasses digital or physical outputs spanning text, image, audio and video forms created by AI systems with varying degrees of human intervention. The evolution of these works has been largely driven by

[11] McKinsey & Company, 'What is generative AI?' (2023) https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-generative-ai accessed 13 March 2025.
[12] Pasick, Adam, 'Artificial Intelligence Glossary: Neural Networks and Other Terms Explained' (The New York Times, 27 March 2023) ISSN 0362-4331 https://www.nytimes.com/2023/03/27/technology/artificial-intelligence-glossary-neural-networks.html accessed 10 March 2025.
[13] Lanxon, Nate, Dina Bass and Jackie Davalos, 'A Cheat Sheet to AI Buzzwords and Their Meanings' (Bloomberg News, 10 March 2023) https://www.bloomberg.com/news/articles/2023-03-10/a-cheat-sheet-to-ai-buzzwords-and-their-meanings accessed 10 March 2025.

technological innovations which enable machines to produce works autonomously or in collaboration with humans.

One of the most notable examples of AI-generated works is text-based production. Large language models, such as OpenAI's GPT series, can generate articles, poetry, reports, and even dialogue based on prompts given by users. These models rely on vast datasets of human-written text to understand and replicate linguistic patterns. While some AI-generated texts require heavy human editing, others can be published with minimal modification.

In the realm of visual art and design, AI has demonstrated remarkable capabilities through AI systems like DALL·E, MidJourney, and Stable Diffusion. These AI systems generate unique images based on text descriptions, often producing high-quality artwork that beats traditional human creativity. AI-generated visual works raise questions about authorship and ownership, as determining whether an AI-generated piece is a derivative work or an original creation remains subject to legal debate.

The generation of music and audio works has also seen significant advancements. Current technological advancements have led to methods by which AI can be used to generate music as seen in commercial music albums such as Taryn Southern's "I AM AI" (2018), SKYGGE's "Hello World" (2018), and Holly Herndon's "Proto" (2019).[14] AI-powered tools like OpenAI's Jukebox and Google's MusicLM can generate compositions in various musical styles, simulating the creativity of human musicians. These AI models analyse patterns in existing songs, learning chord progressions, melodies, and rhythms to create original compositions. While AI-generated music

[14] Berkowitz, Adam Eric, 'Artificial Intelligence and Musicking: A Philosophical Inquiry' (2024) 41(5) *Music Perception* 393–412 https://doi.org/10.1525/mp.2024.41.5.393.

has found applications in video games,[15] film scoring, and background music for content creators, it also raises similar concerns regarding originality and ownership. The role of human composers in an era where AI can produce high-quality music with minimal input continues to be a topic of debate.

Video content generation, while still in its early stages, is rapidly evolving. AI tools like DeepMind's SynthID and OpenAI's Sora demonstrate the ability to create realistic video sequences based on textual or visual inputs. AI-generated videos have been used in animation, advertising, and even journalism, offering cost-effective and scalable solutions for content creation. However, AI-generated videos also present ethical concerns, particularly in the context of deepfakes.[16] The ability to generate realistic but entirely fabricated video works poses risks related to misinformation, identity fraud, and political manipulation.

Another crucial aspect of AI-generated works is the level of human involvement in its creation. These may range from fully AI-generated (with minimal human intervention) to AI-assisted (where humans provide guidance such as inputting a brief prompt, making minor modifications or final touches to generated work). At the core, the proliferation of AI-generated works spurs increasing discussions about its implications under IP law. As will be discussed in this paper, jurisdictions such as the United States and the EU have denied copyright protection to AI-generated works devoid of significant human involvement, while other jurisdictions such as that of Germany continue to explore new frameworks to address this evolving issue.

2.2 Traditional Concepts of Authorship and Ownership

[15] Popgun's Stephen Philips, 'Playing Next Door to Alice: Popgun reveals its music AI' (Musically, 30 June 2017) https://musically.com/2017/06/30/playing-alice-popgun-music-ai/ accessed 10 March 2025.

[16] 'The Malicious Use of Artificial Intelligence: Forecasting, Prevention, and Mitigation' arXiv:1802.07228v2 [cs.AI] (1 December 2024) https://arxiv.org/abs/1802.07228 accessed 10 March 2025.

The Berne Convention[17] which built upon the principles laid down in the Statute of Anne (1710) was adopted in 1886 as the first formal application of international copyright law. This treaty established reciprocal rights among member countries, ensuring that authors from any member nation would have their works protected in all other member nations. The principles enshrined within the articles of the Berne Convention have since become the basis of international copyright law.

The Berne Convention framework provides authors with the means to control how their works are used, by whom, and on what terms. Its articles favour an anthropocentric approach to creative works which are products of human minds. Thus, rights are inherently assigned to such products of human authorship. Article 9 of the Convention unequivocally vests exclusive right in authors to authorise the reproduction of their works, reinforcing the notion that control over creative output vests with the human creator. In a "pre-AI" reality, this legal paradigm not only safeguards authors' economic and personal interests but also promotes creativity by encouraging the creation and dissemination of new works.

After the Berne Convention, the Universal Copyright Convention (UCC) was adopted in Geneva in 1952 under the United Nations Educational, Scientific and Cultural Organization (UNESCO) auspices to extend minimum copyright protection to states that were either unable or unwilling to join the Berne Convention.[18] It came into force in 1955 and offered an alternative route to international recognition of author's rights. Recognizing digital challenges, WIPO concluded two Internet Treaties in 1996: the WIPO Copyright Treaty (WCT), which grants additional economic

[17] Berne Convention for the Protection of Literary and Artistic Works, 1886.
[18] UNESCO, "Universal Copyright Convention, with Appendix Declaration relating to Article XVII and Resolution concerning Article XI" (Geneva, 6 September 1952; entry into force 16 September 1955) https://www.unesco.org/en/legal-affairs/universal-copyright-convention-appendix-declaration-relating-article-xvii-and-resolution-concerning accessed 15 May 2025.

rights for authors in the digital environment[19], and the WIPO Performances and Phonograms Treaty (WPPT) which extends exclusive rights to performers and phonogram producers over their performances and recordings in both analogue and digital contexts.[20]

Fundamentally, conventional IP law locates the concepts of authorship and ownership in human labour and creativity. Such anthropocentric approach is aimed at rewarding authors with moral and economic benefits for their expressions. Similarly, on the international front, the Berne Convention enshrines this position, given that it is concerned with safeguarding the rights of human authors. As a signatory to this convention, Nigeria's domestic laws align with these international standards, as would be seen under the provisions of the Copyright Act.[21]

Under the Nigerian Copyright Act, an author is defined a person by whom "arrangements for the making of a work" was made.[22] Remarkably, the Act is silent on the definition of an author in the case of literary or artistic works. The Act only defines an author in the cases of audiovisual works, collective works, photographic works, sound recordings, and broadcasts. This is arguably an unintended oversight on the part of the draftsman, seeing that the Section 51 of the Act's "predecessor", the Nigerian Copyright Act (Cap C28 LFN 2004), defines an author in the case of literary, artistic or musical works, as the "creator of the work". Nonetheless, authorship under Nigerian law contemplates human creation. Copyright is conferred on every work that is eligible, where the author is an individual who is a Nigerian citizen or is habitually resident in Nigeria, or

[19] World Intellectual Property Organization, "WIPO Copyright Treaty" (WIPO Lex, n.d.) https://www.wipo.int/wipolex/en/text/295166 accessed 15 May 2025
[20] World Intellectual Property Organization, "WIPO Performances and Phonograms Treaty (WPPT)" (WIPO Lex, n.d.) https://www.wipo.int/treaties/en/ip/wppt/ accessed 15 May 2025.
[21] The Nigerian Copyright Act 2022.
[22] Ibid, Section 108(1).

an entity incorporated under the laws of Nigeria.[23] Citizenship of a natural person can be acquired by birth, naturalisation, or registration.[24]

Under the Act, a work is eligible for copyright protection when it is "original in character"[25] and has been fixed in any medium of expression known or later to be developed, from which it can be perceived, reproduced or otherwise communicated either directly or with the aid of any machine or device.[26] The threshold of originality is therefore essential to authorship. In the words of Craig, "Originality is the foundational concept that defines the relationship between an "author" and her "work", for copyright in a work comes into existence at the moment when an author produces fixed original expression".[27] Originality has been judicially construed as requiring that a work must have been the product of special skill and labour expended by an author.[28] This encompasses more than trivial or mechanical intellectual effort.[29]

Once a work is eligible, the Copyright Act 2022 judiciously vests economic and moral rights on the author(s). Economic rights enable authors to receive financial benefits from exploitation of their work,[30] e.g., by way of licensing.[31] Moral rights, on the other hand, protect the personal bond between authors and their work and grant them the right to claim authorship and to prohibit any

[23] Ibid, s.5.
[24] Pursuant to ss. 25-27 of the Constitution of the Federal Republic of Nigeria 1999 (as amended).
[25] Under Section 2(a) of the Copyright Act 2022, some effort must have been expended on making the work, to give it an original character.
[26] Section 2(b) Section 2(a)
[27] C.J Craig, "The Evolution of Originality in Canadian Copyright Law: Authorship, Reward and the Public Interest" (2005) 2(2) *University of Ottawa Law and Technology Journal* 425–445; Noel N. Udeoji, Maduka Ewuzie and Rosemary O. Udeoji, "Interrogating the Concept of Originality and Fixation as Fundamental Towards Achieving Copyright Protection in Nigeria" (2024) 1(1) *Nnamdi Azikiwe University Journal of Public Law*, p. 45.
[28] *Yeni Anikulapo-Kuti & Ors*. v *Iseli & Ors* (2003-2007] 5 I.P.L.R. 53-73)
[29] David Vaver, *Intellectual Property Law*, 2nd Edition, Irwin Law: Toronto, (2011), at p. 100.
[30] ss 9 – 13 outline the nature of copyright vested in the different classes of eligible works.
[31] Section 30 provides a comprehensive framework for the transfer and licensing of copyright.

distortion or mutilation of their work that would be prejudicial to their honour or reputation.[32] These provisions underscore the Act's commitment to maintaining the integrity and dignity of human authors in intellectual property.

With respect to ownership of copyright, the author of a work is typically the first owner of its copyright, possessing exclusive rights to use and distribute the work.[33] However, when a work is created during the course of employment, the employer may hold the copyright, depending on the terms of the employment contract.[34] In cases where a work is commissioned for private use, the commissioner receives a non-exclusive license for non-commercial purposes, while the creator retains the copyright.[35] For collective works, such as anthologies, the individual contributors maintain rights to their respective contributions, whereas the person who initiated or directed the creation of the collective work holds the copyright to the compilation.[36]

The anthropocentric approach to authorship and ownership is also at the heart of the enforcement of rights.[37] Recognizing a human author as the initial owner of copyright provides a basis for legal recourse in cases of infringement. Owners of copyright can enforce their rights against unauthorized uses of their works so that they keep control over such works and are fairly remunerated.[38] Such legal certainty not only benefits authors but also helps provide clear rules for the exploitation of protected works.

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[32] Section 14 outlines the inalienable moral rights vested in an author, independent of the economic rights. Notably, these rights subsist for the duration of the copyright in the work and during the life of the author, and are transmissible by testamentary disposition or operation of law.
[33] Section 28(1) of The Copyright Act 2022; Berkowitz, Adam Eric, 'Artificial Intelligence and Musicking: A Philosophical Inquiry' (2024) 41(5) *Music Perception* 393–412 https://doi.org/10.1525/mp.2024.41.5.393..
[34] Section 28(2) of The Copyright Act 2022
[35] Section 28(3) of The Copyright Act 2022.
[36] Section 29(a) of The Copyright Act 2022
[37] C. Geiger, "Elaborating a Human Rights-Friendly Copyright Framework for Generative AI" (2024) 55 IIC 1129–1165 https://doi.org/10.1007/s40319-024-01481-5 accessed 13 March 2025.
[38] See Sections 35(3)(e) and 35(7) of The Copyright Act 2022.

Furthermore, the emphasis on human authorship reflects a broader philosophical perspective on intellectual property and creativity.[39] It is a recognition that creative works are an expression of human experience, emotion, and intellect. In attributing copyright to human authors, the present frameworks acknowledge the particular contribution of humans to the cultural and intellectual landscape, reaffirming the social value placed upon human creativity.[40]

2.3 Challenges Posed by AI-Generated Works

The innovation of AI has introduced new dimensions to the IP field concerning AI-generated works. The traditional IP regimes, premised on human effort, creativity and authorship, are now faced with challenges in embracing independent creations by AI machines. Who is the author of an AI-generated work? In whom is ownership right for such works vested? Can there be juridical recognition of AI-Generated works? If copyright is indeed vested in such works, how can it be enforced? These are some of the current global uncertainties which necessitate an imperative need to re-examine existing IP laws to address the peculiarity of AI-generated works.

Within this discourse, a fundamental challenge posed by these emerging innovations is one concerning originality. This challenge lies at the heart of debates around the contemporary applicability of the current IP frameworks in light of AI-generated works. Presently, AI generated works are largely precluded from copyright protection because they fall short of the human authorship requirement under current legal frameworks.[41] However, the question of originality still beseeches an answer.

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[39] M. Caldwell, 'What Is an 'Author'? Copyright Authorship of AI Art through a Philosophical Lens" (2023) 60 *Houston Law Review* 405.

[40] Fishman, Joseph, "Recovering Personality in Copyright's Originality Inquiry" (2015) 128(7) *Harvard Law Review* 1333–1395.

[41] Mackenzie Caldwell, supra note 33 at 405.

Originality has been held to mean that such work must originate from the author, and this does not connote newness or novelty of ideas. In the case of *Yemitan* v *Daily Times,*[42] the court held that copyright "belongs to the author, who is the one that actually expended the work, labour, knowledge and skill" in creating the work. This position has been affirmed in *Yeni Anikulapo-Kuti* v *Iseli* [43] where the court averred that a musical work must originate from its author who has expended special skill, and labour in producing it.

In *Ifeanyi Okoyo* v. *Prompt & Quality Services,*[44] while determining the criteria for enforcement of copyright in the plaintiff's architectural drawings, the court aptly noted that a literary or musical work is not eligible for copyright unless sufficient effort has been expended in making it in order to give it an original character.

This interpretation of originality has been observed in the foreign case of *University of London Press v. University Tutorial Press*[45], where Peterson J. noted that "original" does not imply that such work must be the product of original or inventive thought. Similarly, Lord Pearce in *Ladbroke (Football) Ltd v. William Hill (Football) Ltd*[46] asserted that originality means that the work should not be copied but should originate from the author.

The question of authorship in AI-generated works has therefore sparked debates regarding the role of AI developers and end-users in the creative process. When an AI system generates a work independently, it is contentious whether the developer who has developed the algorithm, or the end-user who has inputted data or prompts, should be named the author. In an article published by the Houston Law Review, Mackenzie Caldwell argues that the end user who initiates the creative

[42] (1977-1989] 2 IPLR 141-156).
[43] ([2003-2007] 5 I.P.L.R. 53-73).
[44] (2003-2007) LPLR 117.
[45] [1916] 2 Ch 601.
[46] [1964] 1 All ER 465.

process of AI art can be considered the author, similar to a photographer taking a photograph.[47] He emphatically opines that the "author of AI artwork is the end user who sets the AI art's existence into motion, like a Pollock with a paintbrush or a photographer behind a camera".

The above argument is however not a position taken by all. Rita Matulionyte and Jyh-An Lee[48] argue that conventional approaches to assigning copyright authorship of AI-generated works—whether in favour of users or software developers are inherently flawed. Their view draws inspiration from recent developments in patent law, namely the UK DABUS decision,[49] wherein Smith J. observed that "the owner of a thing is owner of the fruits of that thing. Thus, the owner of a fruit tree will generally own the fruit produced by that tree". Hence, they propose the alternative of assigning authorship and ownership to the owner of the AI system who has invested in and controlled the AI system. They argue that this better rewards innovation and protects investment, offering a balanced approach which reconciles copyright and patent ownership principles under the regime of AI-generated works. Notwithstanding these views, the current absence of a definite and global legal framework leaves room for more uncertainty.

Ownership rights are another complex area of AI-generated works. Traditional IP laws grant economic and moral rights to human authors, thereby enabling them to control the use and dissemination of their work.[50] With AI works, it is problematic to assert who these rights should be attributed to. The developer of the AI system, end-user, or even the person commissioning the work can all claim ownership. The lack of clear legal provisions under the Nigerian Copyright Act

[47] Ibid.
[48] Matulionyte, Rita and Lee, Jyh-An, "Copyright in AI-generated Works: Lessons from Recent Developments in Patent Law" (n.d.) Scripted https://script-ed.org/article/copyright-in-ai-generated-works-lessons-from-recent-developments-in-patent-law/?utm_source=chatgpt.com accessed 13 March 2025.
[49] *Thaler* v. *Comptroller-General of Patents, Designs and Trade Marks* (2023) UKSC 49
[50] See ss. 9-14 of the Copyright Act 2022.

to address such cases leaves space for possible disputes and uncertainties in the exploitation and commercialization of AI-created works in Nigeria.

IP protection for AI-generated works further complicates the IP landscape. As earlier stated, existing legislation is crafted nearly entirely to protect human creations, thus leaving a void when confronted with non-human authors. This highlights the necessity of having legislative reforms that will either amend current laws or establish a new category that will acknowledge the distinctive nature of AI-generated works. Moreover, granting of authorship rights to AI systems, if accomplished, raises concern about accountability because AI entities are not legal persons and cannot be held responsible for infringement or other legal violations.[51] Therefore, the complex legal environment presented by AI-generated works would render current enforcement methods impractical.

3.0 The Riddle of Ownership of AI-Generated Works

3.1 The Nigerian Copyright Act 2022

The Copyright Act 2022 serves as the cornerstone of intellectual property protection in Nigeria, outlining the criteria for copyright eligibility, the rights conferred upon authors, and the mechanisms for enforcement. A critical examination of the Act reveals its human-centric orientation, particularly in its definitions and provisions, which explicitly attribute authorship to human creators.[52] An author under the Act has been defined accordingly, and therefore non-human aspects such as artificial intelligence are not eligible to acquire copyright.

[51] J. Danaher, 'Robots, Law and the Retribution Gap' (2016) 18(4) *Ethics and Information Technology* 299–309.
[52] See s. 108(1) of The Copyright Act 2022.

The principle of originality is one of the foremost principles adopted by the Act.[53] This implies that in order to become eligible for protection under the concept of copyright, a work must have originality deriving from the effort expended on making the work to give it an original character. This reinforces the law's focus on human ingenuity, since originality is conventionally determined by considering the autonomous ability and discretion of a creator. The Act is consistent with global intellectual property regimes like the Berne Convention[54], which also recognizes originality as an essential requirement for copyright protection. By insisting on human intellectual effort as the basis for originality, the web of provisions in the Act effectively traps AI-generated works in a dire knot.

Another significant aspect of the Act is its recognition of moral rights.[55] These rights grant authors the right to attribution and the right to object to any distortion, mutilation, or modification of their work that could harm their honour or reputation. In this way, moral rights are inherently personal and reveal the relationship between an author and their creative expression. Quite interestingly, the personal nature of this right creates the basic presupposition of human authorship because only a person can have their reputation or personal integrity hurt as a result of the changes in the work. This prevents authors from losing some sort of control over the integrity and presentation of their works even when their economic rights have been transferred to another party.

Despite these clear provisions, AI-generated works pose significant legal challenges within the Nigerian copyright framework. The Act does not explicitly address the status of AI-generated works, leading to a grey area in which the absence of human authorship complicates traditional

[53] The requirement under Section 2(a) is that some effort must have been expended on making the work, to give it an original character.
[54] Berne Convention for the Protection of Literary and Artistic Works, 1886.
[55] S. 14 of the Copyright Act 2022.

notions of copyright protection. Given that AI systems can generate texts, artworks, and musical compositions without direct human input, questions arise regarding whether such works can be protected under existing copyright laws and, if so, who should be recognized as the author or owner. Fortunately, no case challenging the Act's provisions has been recorded in Nigeria, providing the legislature ample time to consider and implement any necessary amendments.

Furthermore, the enforceability of copyright in AI-generated works remains a complex issue. Without clear legal recognition, such works may fall into the public domain, meaning they can be freely used without restriction. This creates challenges for businesses and individuals actively investing in AI-generated content, as the lack of protection may deter innovation or lead to disputes over ownership. Some legal scholars argue for the introduction of sui generis protections tailored specifically for AI-generated works which provide limited protection based on investment rather than originality.[56]

The Nigerian Copyright Act, in its current form, reflects a traditional approach to intellectual property that prioritizes human creativity and personal rights. Though consistent with longstanding global principles, the fast-paced development of AI technology requires reform in the law to meet emerging challenges. Through either legislative reform or judicial decisions, Nigeria could have to adopt other models to govern AI-created works without departing from the core principles of copyright law. In the absence of such reform, AI-created works would most likely continue to lack protection under Nigerian copyright law.

3.2 Patent Laws and AI-Generated Works

[56] J. D. Gervais, "The Machine as Author" (2020) 105 *Iowa Law Review* 2053.

The Patents and Designs Act[57] safeguards new inventions that result from inventive activity and are capable of industrial application.[58] The Act vests patent rights in the statutory inventor, such person being anyone who is the first to file or validly to claim a foreign priority for a patent application in respect of the invention, whether or not he or she is the true inventor. Again, this Act adopts an anthropocentric language that raises the question of patentability under the Nigerian legislation for inventions autonomously developed by artificial intelligence (AI) systems. Within the meaning of the Act, "person" has been construed to be a natural person, thereby excluding non-human entities from being inventors. Similar to copyright protection, this construction is in line with the overall principles of patent law, which have historically been premised on human ingenuity and creativity. As such, inventions created autonomously by AI systems, without the direct intervention of humans, would not meet the current standards for patent protection under Nigerian law.

3.3 Comparative Analysis of Judicial Interpretations and Foreign Precedents

The current legal regime in Nigeria, which includes the Patents and Designs Act and the Copyright Act, explicitly grants inventorship and authorship to natural persons. However, the absence of judicial precedent regarding AI-generated works creates uncertainty as to the application of such laws in potential future cases. This calls for the investigation of international case law, drawing from foreign judicial interpretations and precedents to inform potential legislative reforms in Nigeria.

A leading case in this international discourse is *Naruto* v. *Slater*,[59] decided in the United States. In this case, a crested macaque named Naruto snapped photographs using a camera owned by

[57] Patents and Designs Act, CAP. P2 LFN 2004.
[58] S. 1(a) of the Patents and Designs Act, CAP. P2 LFN 2004.
[59] 888 F.3d 418 (9th Cir. 2018).

photographer David Slater. When the People for the Ethical Treatment of Animals (PETA) sued on Naruto's behalf, alleging copyright infringement, the U.S. District Court dismissed the action on the grounds that non-human animals cannot hold copyright under the Copyright Act. This decision was later upheld by the Ninth Circuit Court of Appeals, firmly establishing that the concept of authorship, as envisioned in U.S. copyright law, requires human personality and creativity.

The UK has also taken a firm stance on human authorship. In *Thaler v. Comptroller-General of Patents, Designs and Trade Marks*,[60] the UK Intellectual Property Office denied patent applications that identified an AI system, DABUS, as the inventor. The High Court and Court of Appeal upheld that inventorship in the Patents Act must be restricted to natural persons. The Supreme Court's dismissal of the appellant's appeal further served to underscore that current legal frameworks are not prepared to accept non-human inventors. A similar U.S. case, *Thaler v. Vidal*,[61] reached the same determination, with the U.S. Patent and Trademark Office (USPTO) rejecting patent applications that named an AI system as the inventor.

Apart from these decisions, the U.S. Supreme Court case of *Feist Publications* v. *Rural Telephone Service*[62] has been very influential in this regard. The Court clarified that copyright protection hinges on the work possessing "at least some minimal degree of creativity." Sweat of the brow, sheer labour is insufficient. This test was reaffirmed in subsequent cases such as *Morrissey v. Procter & Gamble*,[63] where the Court ruled that works that are the result of evident compilation or pure technical processes fail the originality requirement for copyright protection. These rulings

[60] UKSC 49.
[61] 43 F.4th 1207 (Fed. Cir. 2022).
[62] 499 U.S. 340 (1991).
[63] 379 F.2d 675.

together reflect the deep-seated principle that copyright is inextricably linked with human creativity and expression.

Recent lawsuits also highlight the urgent need for ownership to be clarified in the aspect of AI-generated works. In a 2023 US class action lawsuit, Stability AI, MidJourney, and DeviantArt were accused of infringing the rights of millions of artists by training AI models on over five billion images crawled from the internet without any authorization.[64] Similarly, in February 2025, OpenAI was sued for allegedly using news articles from The Intercept to train ChatGPT, with the U.S. District Court rejecting the motion to dismiss the lawsuit.[65] Here, the Judge highlighted the fact that damage from the removal of copyright management information had been sufficiently established by the plaintiff. These cases highlight the need for legal frameworks that not only encourage innovation, but also effectively protect the interest of human creators.

On a national level, the Nigerian judiciary is yet to address these issues directly. However, in *Ifeanyi Okoyo v. Prompt & Quality Services*,[66] the court rejected arguments that unregistered architects were not eligible for copyright protection for their architectural drawings. It was held that the plaintiffs, being Nigerians, satisfied the status requirement and were entitled to copyright protection. Though not directly relevant to AI-generated works, this decision shows a willingness to protect human creativity and may be a guiding precedent in future disputes involving AI.

Cumulatively, these international precedents illustrate a global consensus: current legal frameworks, particularly in the US and UK, rely on human authorship and do not account for non-human authors. Yet, as AI systems become increasingly capable of generating complex works

[64] Andersen v Stability AI, 700 F. Supp. 3d 853.
[65] The Intercept Media Inc. v. OpenAI Inc., 24-CV-1515 (JSR)
[66] (2003-2007) LPLR 117

without direct human intervention, the need for legal reform becomes more pertinent. Some nations, like Germany, have begun exploring more flexible approaches. In a landmark decision,[67] the German Federal Court of Justice took a broader approach and ruled that inventions created by AI are patentable as long as they meet the current requirements for patent protection under German law. The ruling represents a drastic inroad into the strict natural person requirement, and acknowledges the evolving role of AI in innovation.

This comparative analysis not only underscores the inadequacy of existing law in the face of current AI innovation, but also calls for an urgent international consensus to develop coherent IP frameworks.

4.0 Key Legal, Ethical and Policy Debates

At the centre of the controversies that have been spurred by the proliferation of AI are the philosophical concepts of authorship and originality, traditionally based on human creativity.[68] The creation of AI-generated works interferes with these concepts, insofar as AI algorithms can generate autonomously works that *prima facie* show originality and creativity. Can a non-conscious and non-intentional being be an author? The legal framework required to facilitate a symbiosis between man and machine has fallen woefully behind.[69] As earlier evinced, the prevailing laws in jurisdictions such as the United States and the European Union maintain that authorship requires significant human contribution.[70]

[67] Federal Court of Justice, 11.06.2024, X ZB 5/22 - DABUS, Germany.
[68] M. Caldwell, *supra note* 33.
[69] Financial Times, "AI Copyright Wars Need a Market Solution" (Financial Times, March 6, 2025) https://www.ft.com/content/304d660f-6cac-4e38-a6d5-d8d98f5770fb accessed 13 March 2025.
[70] See Thaler's case, *supra* note 43.

Outside the philosophical terrain, the economic consequences of conferring ownership rights on AI-generated works has been subject to contentions. Longstanding patent, trademark, trade secret, and copyright laws have served as foundational pillars of our economic and creative systems.[71] Attributing IP rights to AI machines or to their creators can possibly tip the economic balance of the creative sector. On the one hand, it can spur innovation since it incentivises the development of advanced AI capable of generating new works. On the other hand, it can also destabilise existing economic structures by diminishing the value and remuneration of human authors. A research by the International Monetary Fund (IMF)[72] highlights that AI-powered innovations can increase productivity, boost economic growth, and lift incomes. However, it could also wipe out millions of jobs and widen inequality.

The challenge therefore lies in devising policies that balance the promotion of AI-created innovation and the protection of economic rights of human creators. Thus, governments find themselves caught between wanting to be attractive for AI companies to scale and drive economic growth, while also protecting its world-class creative industry.[73]

The possibility of AI replacing human creators also raises dire ethical concerns. Creativity is primarily considered a human activity, closely tied with personal expression. Nobel laureate Sir Kazuo Ishiguro has voiced this concern, opining against the unbridled use of AI in the creative

[71] Grossman, Marla, "What Intellectual Property Policy Should Look Like in the Age of AI" (IPWatchdog, 28 Oct. 2024) https://ipwatchdog.com/2024/10/28/intellectual-property-policy-look-like-age-ai/id=182610/ accessed 13 March 2025.
[72] Melina, Giovanni, "Mapping the World's Readiness for Artificial Intelligence Shows Prospects Diverge" (IMF Blog, June 25, 2024) https://www.imf.org/en/Blogs/Articles/2024/06/25/mapping-the-worlds-readiness-for-artificial-intelligence-shows-prospects-diverge accessed 13 March 2025.
[73] Financial Times, "AI Copyright Wars Need a Market Solution" (Financial Times, March 6, 2025) https://www.ft.com/content/304d660f-6cac-4e38-a6d5-d8d98f5770fb accessed 13 March 2025.

field.[74] Beyond this, the propagation of misinformation and deepfakes is a prominent ethical problem. AI could potentially be used to generate highly realistic but purely synthetic content which can destabilize public trust and distort reality. Besides, AI systems can also mirror or magnify certain biases in its data set to generate biased or discriminatory works. Given the possibility of bulk scraping[75] of data for training AI systems, privacy is also at risk. More pertinently, AI systems which use complex algorithms are inherently autonomous and thus create a "responsibility gap".[76] This raises the issue of accountability as it may be difficult to hold someone responsible for harm or misrepresentation arising from it. All these collectively call for strict regulatory standards and principles to ensure that nascent technological advancements do not negate the interest of society.

The potential for harmonizing legal systems to AI authorship at the international level is another issue. The presence of various legal jurisdictions and economic interests explains the fragmented state of the legal architecture regarding AI-generated works globally. For instance, while the U.S. and UK have adopted a hard-line approach to human authorship, other legal systems like that of Germany may be more receptive. The absence of consistency can invariably lead to legal uncertainty, particularly in cross-border cases involving AI-generated works that span across multiple jurisdictions. A global discussion among stakeholders is therefore necessary to surmount these challenges and work towards harmonized international standards.

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[74] K. Ishiguro, "AI Will Become Very Good at Manipulating Emotions, Kazuo Ishiguro on the Future of Fiction and Truth" (The Guardian, March 8, 2025) https://www.theguardian.com/books/2025/mar/08/ai-will-become-very-good-at-manipulating-emotions-kazuo-ishiguro-on-the-future-of-fiction-and-truth accessed 13 March 2025.
[75] The unauthorized utilization of copyrighted or personal material.
[76] J. Danaher, *supra note* 45.

Comparative case studies from the European Union and the United States reveal existing trends and best practices on this matter and highlight the necessity of ongoing evaluation and amendment of IP law so that it efficiently deals with the nascent advancements.

5.0 Recommendations for Nigerian Law and Policy

With the rise and steep advancement of AI as well as its growing influence on the creative industry, it is extremely essential for the Nigerian legislature to address solutions to the current legal uncertainty around works generated by AI. The current Copyright Act 2022, does not contemplate works generated by AI. This is a major wall to any presumption or claims for copyright protection. To overcome this uncertainty, a unified approach entailing statutory enactments, judicial interpretations and ratification of relevant international treaties which may exist in the near future is necessary.

In the first stroke, amendments to the Nigerian Copyright Act are recommended to specifically address AI-generated content and stipulate a criteria for its eligibility for protection. The current Act focuses on human authorship and vests ownership rights solely on natural persons. This expressly precludes AI-generated works from protection under copyright law. To fill this gap, the Act needs to make provisions for works created independently by AI systems. These changes would define the status of AI-generated content, determine the rights of the stakeholders who are involved in creating and implementing AI, and create guidelines for exploitation and ownership. This proactive legislative approach would align Nigerian law with the evolving technological landscape and offer a sound framework for the protection of AI-generated works.

While adopting this legislative approach, judicial decisions also have an important role in shaping the legal frameworks governing AI ownership and authorship. Currently, no Nigerian court has

had cause to determine a case involving AI-generated content under the Copyright Act. This leaves open critical questions about how the Act's provisions might be interpreted and applied to works produced by AI. Should a case eventually appear before a Nigerian court, such court would be left to consider the possibility of adapting the prevailing position of law on authorship to accommodate non-human authors or if some alternative sense should be adopted instead. The holdings in such case would then serve as precedents for future cases.

An allocation of rights between AI developers, users, and creators through hybrid frameworks may be a pragmatic solution to the complexities permeating the ownership of AI-generated content. Hybrid models take into account the fact that AI systems are usually a collaborative creation, involving input from programmers, data providers, and end-users. They delineate the rights and responsibilities among these stakeholders so that all parties' interests can be well-balanced. For example, the developers of an AI system may hold rights to the basic algorithms while users may be granted rights to the works created through them and their interventions. This fosters innovation by protecting investments in the development of AI and encourages responsible use and sharing of works produced by AI. Implementation would however require clear statutory provisions and agreements expressly delineating the rights and responsibilities of each of the parties involved in the production of AI-generated works.

The world has begun addressing the issues brought about by AI through signing various treaties and conventions. Notably, the Council of Europe adopted the Framework Convention on Artificial in 2024.[77] This first-of-its-kind treaty aims to ensure that AI systems are utilized in accordance with human rights and the rule of law. By joining such international instruments, Nigeria would

[77] Framework Convention on Artificial Intelligence and Human Rights, Democracy, and the Rule of Law, adopted in May 2024

be in a position to harmonize its national policies with global norms, facilitating international cooperation and trade. Membership in international forums and treaty networks would further enable Nigeria to make contributions to the international discourse on AI regulation, so that its own interests and perspectives are represented.

6.0 Conclusion

A balanced coexistence of AI-generated content under Nigerian intellectual property law must counterpoise innovation, legal certainty, and the protection of human creativity. Since AI-generated creations are not attributable to human creativity, they presently find themselves shrouded by legal uncertainty. Without legislative or judicial direction, this gap potentially threatens technological progression and economic value in Nigeria. To remedy this, an amendment by the Nigerian legislature is highly recommended to expressly cater to AI-generated works. As more controversies arise, the guidance of Nigerian courts is also needed to affirm AI authorship and ownership. Unless the needed reforms are undertaken proactively, the Nigerian economy faces impending hurdles of legal uncertainty, watered-down IP enforcement, and losses in global competitiveness. The steep proliferation of AI-generated content definitely calls for proactive steps and expedient actions.