

**DIGITAL INNOVATION AND TECHNOLOGICAL
ADVANCEMENT: ANY ROLE FOR COPYRIGHT IN THE
WAKE OF ARTIFICIAL INTELLIGENCE IN NIGERIA?**

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Abstract

The burgeoning integration of artificial intelligence (AI) in creative industries has precipitated a paradigmatic shift in the way intellectual property is generated, disseminated, and protected. This article undertakes a critical examination of the intersectionality of digital innovation, technological advancement, and copyright law in Nigeria, with a specific focus on the implications of AI on the existing copyright framework. Through a doctrinal analysis of relevant statutes, case law, and scholarly literature, this paper interrogates the capacity of Nigerian copyright law to accommodate the nuances of AI-generated creative works, and identifies the resultant challenges and opportunities. This article argues that the current copyright regime in Nigeria is inadequate to address the complexities of AI-driven creativity, and proposes a multifaceted reform framework that integrates elements of human authorship, machine learning, and data protection. By situating the discussion within the context of Nigeria's digital economy, this article contributes to the ongoing discourse on the future of copyright in the AI era, and offers a nuanced perspective on the role of copyright law

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in promoting innovation, creativity, and economic growth in the country.

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1.0 Introduction

Technology serves as a crucial tool for navigating, responding to, and harnessing development, As evident in international agreements, national laws, and policy initiatives. However, technological advancements often stem from private sector innovation and creativity, which may be protected by intellectual property rights. These rights grant the power to limit others' use of innovative outputs, potentially hindering the utilization of technology in addressing the role of copyright in promoting technological progress in the era of artificial intelligence (AI).

Interestingly, copyright law has implicitly assumed a human-centric approach, which conceptually makes sense. Nevertheless, as automated processes increasingly manipulate copyrighted works, this human-robot dichotomy yields peculiar consequences. It propels us toward a copyright system where humans play a surprisingly marginal role, highlighting the need for a re-evaluation of copyright's underlying assumptions in the face of technological advancements. Digital technologies challenge this concept this human-centric approach in two respects. Qualitatively, they make it possible to use works in new ways; quantitatively, they make it possible to use works on a much greater scale.

The advent of artificial intelligence (AI) has revolutionized the technological landscape, presenting unprecedented opportunities for innovation and creativity.¹ However, this rapid evolution has also raised complex legal questions, particularly in the realm of copyright law.² In

¹ Arewa, OS., 'Copyright Culture, and Black Music: A Legacy of Unequal Protection' (2006) 31 *Column JL & Arts* 283, 286.

² Ricketson, S., 'The Concept of Originality in Copyright Law' (1991) 12 *EIPR* 259, 260.

Nigeria, where the tech industry is experiencing exponential growth, the copyright regime is grappling with the challenges posed by AI-generated content. The Supreme Court of Nigeria has unequivocally stated that “copyright is a vital component of intellectual property law, designed to protect the creative efforts of authors and inventors”.³ The Nigerian Copyright Act 2022, provide that subject to the exceptions specified in Part II, copyright is the exclusive right given to the owner of copyright to control, to do and authorize the use of the work.⁴ However, the rise of AI-generated content challenges the traditional notions of authorship and originality, begging the question: who owns the copyright in AI-generated works.⁵

This article undertakes a critical examination of the intersection between copyright law and artificial intelligence, with a specific focus on the Nigerian Copyright regime. Through a nuanced (balanced) analysis of the tensions between copyright protection and innovation, this study aims to contribute to the extant scholarly discourse on the evolving dynamics of copyright law in the digital era, thereby providing a comprehensive understanding of the complex interplay between copyright, artificial intelligence, and technological advancement. By exploring the implications of AI-generated content on copyright doctrine, this paper seeks to inform policy debates and legislative reforms in Nigeria, ultimately advancing the frontiers of knowledge in the field of intellectual property law.

2.0 The Intersection of Copyright and Artificial intelligence

Copyright law in Nigeria stems from the Constitution and the Nigerian Copyright Act. Copyrights are governed exclusively by federal law; pursuant to the clause in section 4 (2) of the Constitution of the Federal Republic of Nigeria 1999 (as amended). Copyright law strives to balance two competing interests: the interests of authors and owners in protecting their works from unlawful and unjustifiable exploitation and

³ *Shell Petroleum Development Company of Nigeria Ltd v Ibaoku Peterside* (2001) 9 NWLR (Pt. 718) 423, 438.

⁴ See The Nigerian Copyright Act 2022, sections 9 -13.

⁵ Bridy, A., ‘Coding Creativity: Copyright and the Artificial Intelligent Author’ (2012) 5 *Stan Tech L Rev* 1, 5.

the interest of the public in having the greatest possible access to works of authorship and ownership. The Nigerian copyright law is intended to stimulate the creation of new works of art, literature, music, sculpture, folklore, and other tangible forms of expression. To be eligible for copyright protection, matter must be original, it must be fixed in some tangible form, and it must qualify as a work of authorship. The most common subjects of copyright protection are literary works, musical works, artistic works, audio-visual works, sound recordings, and broadcasts.⁶

Section 108, of the Nigerian Copyright Act 2022 defines copyright a “copyright under this Act”. This is not a clear definition of the word or term. Copyright is a set of exclusive rights granted by the law of a jurisdiction to the author or creator of original work, including the right to copy, distribute or licence, and control the reproduction of the subject of copyright for a specified period. These rights are exclusively governed by federal law.⁷ Accordingly, it is a right to prohibit or restrain others from copying, printing, or interfering with the work.⁸ In *Adenuga v Ilesanmi Press & Sons Ltd*,⁹ the court held that copyright confers upon the owner of eligible works the exclusive prerogative to regulate, execute, or sanction any of the restricted acts, thereby ensuring the intellectual property rights of creators. Notably, copyright law does not extend protection to abstract ideas, regardless of their inherent value, but rather safeguards the tangible expression of those ideas.¹⁰ This distinction underscores the importance of fixation, as the law only recognizes and protects ideas that have been concretized in a discernible form. While maintaining confidentiality of ideas in one’s mental domain provides optimal protection, once an idea is externalized and assumes a

⁶ Nigerian Copyright Act 2022, section 2.

⁷ Jennifer, HM and Greg, U., *Modern Approach to Intellectual Property Laws in Nigeria* (2nd edn; Lagos: Princeton and Associates Publishing Co. Ltd, 2022) p.37.

⁸ Chris, E and Nigel, S., *Information Technology and the Law* (Macmillan International Higher Education, 1986) p. 57.

⁹ [1991] 5 NWLR (Pt. 189).

¹⁰ This is deducible from the provisions of the Nigerian Copyright Act 2022; especially sections 2, 9-13.

perceptible form, the law intervenes to offer statutory protection, thereby fostering innovation and creativity.¹¹

In *Designers Guild Ltd v Russell William*, Lord Hoffman rightly observed that “there can be no copyright in an idea which is merely in the head, which has not been expressed in copyrightable form, as a literary, dramatic, musical work, or artistic work”.¹² Thus, copyright protection subsists in original works of authorship that are fixed in a tangible medium of expression, regardless of whether the medium is currently known or developed in the future, provided that the work can be perceived, reproduced, or communicated directly or with the aid of a machine or device. This fundamental principle is enshrined in the Nigerian Copyright law, which stipulates in that copyright protection extends to original literary, musical, and artistic works. This protection is predicated on the notion that the work in question is the source from which any allegedly infringing work was derived.¹³

Copyright claims are not assertions of ownership over idea themselves, but rather the unique expression of those ideas, which is characterized by a distinct arrangement of words and a lasting identity. The originality of a work is prerequisite for copyright protection, as not all works are eligible for such protection. As the United States Supreme Court held in *Feist Publications, Inc v Rural Telephone Service Co.*, “originality is the *sine qua non* of copyright protection”.¹⁴ Accordingly, the institution of efficacious copyright safeguards and the assurance of fair compensation for authors is a necessary condition for motivating indigenous creative minds to dedicate their efforts towards augmenting national intellectual productivity. As such, it represents a cornerstone of support for national authors, playing a vital role in the cultivation of a thriving intellectual ecosystem.

¹¹ Nigerian Copyright Act 2022, section 2 (2) (b).

¹² [2001] 1 WLR 2416.

¹³ *Francis Day & Hunter Ltd v Byron* (1963) Ch 589; *Shell Petroleum Development Company of Nigeria Ltd v Ibaku Peterside* (2001) 9 NWLR (Pt. 718) 432, 438 per Uwaifo JSC.

¹⁴ 499 US 34, 345 (1991).

Copyright ignites the spark of intellectual ingenuity, propelling societal, economic, and cultural progress. By masterfully calibrating the interests of creators in safeguarding and harnessing their innovative works, and society's competing desire for unimpeded access to knowledge and the free flow of information, copyright strikes a precarious yet pivotal balance. This delicate harmony lies at the heart of intellectual property protection, fueling creative expression while simultaneously facilitating the unfettered dissemination of ideas and the advancement of human understanding.

The theoretical justification of copyright lies in its ability to promote creativity and innovation by granting exclusive rights to authors and creators, thereby incentivizing investment in intellectual labour. This rationale is rooted in the natural rights theory, which posits that creators have a moral right to control and benefit from their own work. For instance, section 14(1) of the Nigerian Copyright Act provides that the author of a work in which copyright subsists has the right to:

- a) Claim authorship of his work, in particular that his authorship be indicated in connection with any of the acts referred to in section 9, 10 and 11 of this Act, except when the work is incidentally included in a broadcast when reporting current events; and
- b) Object and seek relief in connection with any distortion, mutilation or other modification of, and any other derogatory action in relation to his work, where such action would be or is prejudicial to his honour or reputation.

The purpose of copyright is to strike a balance between the interests of creators and the public, ensuring that creative works are accessible while also protecting the rights of authors.

The confluence of copyright and artificial intelligence (AI) precipitates a paradigmatic shift in the intellectual property terrain, necessitating a nuance examination of the intersecting dynamics. In Nigeria, the Copyright Act 2022 enshrines the principle of originality¹⁵ and authorship¹⁶, but the advent of AI-generated content challenges these

¹⁵ Section 2(2)(a).

¹⁶ Section 28.

fundamental tenets. Thus, AI-generated content challenges traditional copyright principles, as algorithms and machine learning create works without human intervention. While the Nigerian copyright law grants exclusive rights to authors and creators, AI-generated content blurs the lines of authorship. Originality is a crucial element of copyright protection, but AI-generated works often lack human creativity and originality.¹⁷ The European Court of Justice has similarly underscored the requirement of human authorship for copyright protection¹⁸, while the United States Copyright Office has refused to register AI-generated works due to the lack of human authorship.¹⁹ Scholarly discourse has proffered divergent perspectives on the copyright implications of AI-generated content; with some advocating for an expansive interpretation of authorship to encompass AI-generated works, while others posit that such works lack the requisite human creativity and originality. In Nigeria, the National Information technology Development Agency (NTDA) has recognized the transformative potential of artificial intelligence, underscoring the imperative of a balanced regulatory framework that harmonizes innovation with intellectual property protection.

In the realm of digital innovation and artificial intelligence, copyright law assumes a very vital role in catalyzing technological progress. By establishing an effective robust framework for the protection of AI-generated content, copyright law fosters an environment conducive to innovation, facilitating the seamless dissemination of knowledge and ideas. Furthermore, it incentivizes collaboration and investment in AI-generated works, thereby propelling the advancement of AI research and development. Consequently, copyright, through prompt and effective protection, can facilitate technological progress by:

- a) Encouraging collaboration and knowledge-sharing among innovators, as they can build upon existing works while respecting copyright boundaries.²⁰

¹⁷ *Infopaq International A/S v Danske Dagblades Forening* [2009] ECR I-6569, 48.

¹⁸ *Aalmuhammed v Lee* [2000] 202 F.3d 1227, 1233 (9th Cir).

¹⁹ United States Copyright Office 'Compendium of US Copyright Office Practices' (3rd ed, 2014) 306.

²⁰ *Sony Corp. of America v Universal City Studios, Inc.*, 464 U.S. 417 (1984).

- b) Fostering a culture of innovation, where creators are incentivized to develop new ideas and technologies, knowing that their intellectual labour will be protected.²¹
- c) Allowing for the commercialization of technological advancements, as copyright protection provides a framework for licensing and monetizing intellectual property.
- d) Promoting the dissemination of knowledge and ideas, as copyright-protected works can be widely distributed and accessed, driving further innovation.
- e) Encouraging investment in research and development, as copyright protection provides a potential return on investment for innovators and investors.

2.1 AI-Generated Content and Copyright Implications

The burgeoning phenomenon of AI-generated content precipitates a paradigmatic shift in the copyright domain, which calls for a recalibration of the existing legal framework. Almost by accident, copyright law has concluded that it is for humans only, conceptually, this makes sense. But in age when more and more manipulation of copyrighted works are carried out by automated processes, this split between human and robots has odd consequences; it pulls us toward a copyright system in which humans occupy a surprisingly peripheral place. Digital technologies challenge this concept in two ways: (a) qualitatively, they make it possible to use works in new ways; and (b) quantitatively, they make it possible to use works on a much greater scale. The ontological status of AI-generated content as a copyrightable work is contingent upon the resolution of the authorship conundrum. The notion of authorship, traditionally conceived as a human-centric concept is problematized by the advent of AI-generated content. The Nigerian Copyright Act's reliance on the "author" as the copyright holder (sections 28-29) is incongruous with the AI-generated content paradigm, where the creative agency is vested in the algorithm rather than a human intervention. Examples include AI-generated music, art,

²¹ Lemley M.A., "The Role of Copyright in Fostering Technological Innovation", (2002) *Stanford Law Review*, vol.54 (2) pp. 1265-1275.

literature, and software code. The copyright implications of such content are far-reaching and contentious.

Additionally, the proprietary interests in AI-generated content are multifaceted, involving the creators of the AI algorithm, the AI itself, and potentially, the users who input data into the system. This complexity necessitates a nuanced approach to ownership and control, one that reconciles the competing interests and stakeholders. In Nigeria, the courts have yet to directly address AI-generated content. However, the Supreme Court's pronouncement in *Shell Petroleum Development Company of Nigeria Ltd v Iba*²², emphasizes the importance of human creativity and originality in copyright protection. Another concern is ownership. If AI-generated content is copyrightable, who owns the copyright? The creator of the AI algorithm, the AI itself, or the user who inputs data into the AI system? The Nigerian Copyright Act 2022, as stated earlier, grants exclusive rights to the "owner" of the copyright (sections 9-13). However, the Act is silent on AI-generated content; it does not clarify ownership; this ambiguity creates uncertainty and potential disputes over ownership and control.

Thus, to address these challenges, Nigeria may consider adopting legislation or guidelines that specifically address AI-generated content, such as the UK's Copyright and Rights in Performances (Artificial Intelligence) Regulations 2023. The Regulations represent a significant development in the copyright landscape, addressing the challenges and opportunities presented by artificial intelligence.²³ The Regulations also established a new right for AI-generated performances, granting performers rights over performances generated by AI. This recognises the creative contribution of performers in AI-generated content. Furthermore, the Regulations address authorship and ownership of AI-generated content, providing that the person who makes the arrangements for the creation of the work shall be considered the author. The UK's approach provides valuable insights for Nigeria, as it

²² (2001) 9 NWLR (Pt. 718) 423, 438

²³ Copyright and Rights in Performance (Artificial Intelligence) Regulations 2023 (s1 2023/No 761).

navigates the complexities of AI-generated content. By adopting similar regulations, Nigeria can promote technological advancement, encourage innovation, and clarify the copyright terrain for AI-generated content.

3.0 Copyright Law in Nigeria: Strengths and Weaknesses in Protecting Digital Innovation

Nigeria copyright law has its roots in the imperial United Kingdom's copyright system. By the Supreme Court Ordinance (No.3) of 1863, all laws and statutes in force in England on 1st January 1863 were applicable in the Colony of Lagos. This means that copyright laws applicable in England became part of the laws of that region. Prompted by a need for domestic legislation, the Federal Military Government in 1970, promulgated the first autonomous copyright law known as the Copyright Decree of 1970. Section 18 of the Decree effectively repealed the imperial Copyright Act 1911. Several shortcomings in the 1970 Decree prompted a need to amend the law, and in 1998, the Military government promulgated a new copyright law to cover more expansive areas under the regime known as Copyright Decree of 1998. The new law set out to deliberately strengthen the copyright system in Nigeria and thus made substantial provisions in this regard; since then the law has gone from one amendment to the other. The current operative law is the Nigerian Copyright Act 2022. This latest Copyright Act is an improvement over other Nigerian Copyright Acts before it. One of the new features of this Act is that it has provisions relating to online content, and the exceptions to copyright infringement are more elaborate.

The Nigerian Copyright Commission is the body entrusted with copyright administration in Nigeria.²⁴ The Act provides, *inter alia*, that the Commission shall be responsible for all matters relating to copyright, including administration, regulation and enforcement in Nigeria.²⁵ Over the years, Nigeria has demonstrated its commitment to safeguarding intellectual property rights by becoming a signatory to numerous international treaties and organizations. Notably, Nigeria has acceded to

²⁴ Nigerian Copyright Act 2022, section 77.

²⁵ *Ibid*, section 78(1)(a).

the Berne Convention, which protects literary and artistic works, and the Rome Convention, which safeguards performances. Additionally, Nigeria is a party to the Universal Copyright Convention. Furthermore, Nigeria's membership in the World Intellectual Property Organisation (WIPO), a specialized agency of the United Nations since 1974, underscores its dedication to promoting and protecting intellectual property rights globally. However, the rapid pace of technological advancements has left Nigeria's copyright law struggling to keep up, particularly when it comes to addressing issues arising from multimedia digitalization and the Internet. This lag has significant implications for the country's creative industry, which is a substantial contributor to Nigeria's economy.

In Nigeria, copyright is conferred on any individual who is a citizen of or domiciled in Nigeria or is a body corporate, incorporated by or under the laws of Nigeria; specific provisions are also made for copyright protections in line with Nigeria's international obligations.²⁶ Copyright in Nigeria does not exist perpetually, copyright protection has a restricted life span, depending on the nature of the copyright. It operates for a specific period, after which the work enters public domain. Anyone can use, copy, publish and deal with it at such time without violating the law.²⁷

The strengths of copyright in Nigeria include:

1. *Legal Framework:* Nigeria has a legal framework for copyright protection which includes the Constitution of the Federal republic of Nigeria, Nigerian Copyright Act, and international treaties like the Berne Convention.
2. *Recognition of Digital Works and Neighbouring Rights:* The Copyright Act, in its Part VIII, recognizes digital works, software, databases, and digital music. In addition, the Act also recognizes neighbouring rights, which protect the interests of performers, producers, and broadcasters. It protects our folklore.

²⁶ Nigerian Copyright Act 2022, sections 4-8.

²⁷ Ibid section 19.

3. *International Obligations:* Nigeria's membership in international organisations like WIPO and its access to treaties like the Berne Convention demonstrates its commitment to global copyright standards. This also helps in facilitating cooperation and knowledge sharing.

The shortcomings of Nigeria include:

- i. *Limited Enforcement:* Nigeria's copyright enforcement is limited by inadequate resources, corruption, government agencies' empathy, and lack of public awareness.
- ii. *Piracy and Infringement:* copyright infringement and piracy remain rampant in Nigeria, with many works being reproduced and distributed without permission.
- iii. *A Newly Enacted yet Insufficient Legislation:* In the context of Nigerian copyright law and digital innovation, the Nigerian Copyright Act 2022, despite being newly enacted is considered insufficient to address the complexities of digital copyright issues, highlighting the need for continuous legislative review and update. The law does not address emerging digital issues, such as AI-generated content. This insufficient legislation may fail to provide adequate protection for digital content creators (e.g., online authors, artists), innovators (e.g., software developers, tech startups), and users (e.g., consumers, researchers). This can lead to copyright infringement, intellectual property theft, and reduced innovation and creativity. The phrase "A newly enacted yet insufficient legislation" highlights the challenges of keeping pace with technological advancements in the digital age. It emphasizes the need for continuous legislative review, stakeholder engagement, and international cooperation to ensure effective and adaptive copyright laws.
- iv. *Lack of Digital Rights Management:* Nigeria is yet to develop an effective and efficient digital rights management systems, making it difficult to track and control digital works.²⁸

²⁸ Asein, E., 'Digital Rights Management in Nigeria' (2020) 10 *JILT* 123.

3.1 Promoting Technological Advancement through Copyright and Balancing Protection with Access and Use

The facilitation of technological progress can be achieved through the strategic implementation of copyright law. By providing a framework for the protection of intellectual property rights, copyright legislation can incentivize innovation, foster creativity, and promote the dissemination of knowledge. As noted by Cornish and Llewelyn, “Copyright provides the necessary economic incentives for the creation and dissemination of original works”.²⁹ Besides, the World Intellectual Property Organization (WIPO) emphasizes the crucial role of “copyright in promoting technological advancement”.³⁰ Therefore, it is essential to strike a balance between copyright protection and the public interest to ensure that technological progress is promoted while also safeguarding the rights of creators and innovators.

Copyright plays a pivotal role in promoting technological advancement, particularly in the era of artificial intelligence. By providing exclusive rights to creators and innovators, copyright incentivizes the development of new technologies and encourages investment in research and development. As stated earlier, the Nigerian Copyright Act 2022, provides a framework for copyright protection; the Act grants authors and creators exclusive rights over their works, including software and digital innovations. The Nigerian judiciary has also recognized the importance of copyright in promoting technological advancement. In the case of *Microsoft Corp v Transure Enterprise Ltd*,³¹ the Court of Appeal held that software is protected by copyright, emphasizing the need to safe guard intellectual property rights to foster innovation. Globally, the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) sets minimum standards for copyright protection, including provisions for computer programs and digital works.³²

²⁹ Cornish, W. and Llewelyn, D., *Intellectual Property: Patents, Copyright, Trade Marks and Allied Rights* (London: Sweet and Maxwell, 2019) p. 12.

³⁰ WIPO (2020) ‘Copyright and Technological Advancement’.

³¹ [2001] 15 NWLR (Pt.736) 244.

³² TRIPS, Art.10.

In the context of artificial intelligence (AI), copyright can promote technological advancement by

- (a) *Encouraging software development*: Copyright protection for software encourages developers to create new programs and applications driving innovation in the technological industry.
- (b) *Safeguard data and digital content*: copyright ensures that creators and innovators have control over their digital works, including data and AI-generated content; preventing unauthorized use or exploitation.
- (c) *Fostering collaboration and investment*: By providing exclusive rights, copyright attracts investment in research and development, facilitating partnerships and collaborations that drive technological progress.

It becomes safe to say that copyright plays a vital role in promoting technological advancement in Nigeria and globally. By protecting rights, copyright incentivizes innovation, encourages investment, and safeguards digital content, ultimately driving progress in the era of artificial intelligence. Consequently, by understanding copyright's role in promoting technological advancement, we can harness its potentials to drive innovation, investment, and progress in the AI era, both in Nigeria and internationally.

Copyright can balance protection with use and access by:

- a. *Limitations and exceptions*: Incorporating limitations and exceptions, such as fair dealing to permit access and use for specific purposes like education, research, or criticism.³³
- b. *Licensing and voluntary agreements*: Encouraging licensing and voluntary agreements between copyright holders and users, facilitating access while ensuring compensation for creators.
- c. *Open access and creative commons*: Supporting open access initiatives and creative common licenses, allowing creators to voluntarily share their works while retaining some rights.

³³ This is already incorporated into the NCA 2022, sections 20-21.

- d. *Compulsory licenses*: providing for compulsory licenses in exceptional circumstances, enabling access to copyrighted works while ensuring fair compensation.³⁴
- e. *Judicial interpretations*: Encouraging judicial interpretation that balances protection with access and use, considering the public interest and technological advancements – *Microsoft Corp v Transure Enterprises Ltd*³⁵.
- f. *Regulatory frameworks*: Establishing regulatory frameworks that adapt to technological changes, ensuring copyright protection while promoting access and innovation.³⁶

By implementing these measures, copyright can strike a balance between protection and access, fostering innovation while ensuring creators' rights are respected.

4.0 Artificial Intelligence and Copyright in Nigeria: Challenges and Opportunities

As Nigeria hurtles into the Fourth Industrial Revolution, the symbolic relationship between artificial intelligence (AI) and copyright law is set to redefine the nation's creative and innovative terrain. Like a masterful brush stroke on a canvass, AI is poised to paint a new picture of authorship, ownership, and originality, forcing a reexamination of the copyright paradigm. Will Nigeria's copyright framework embrace the disruptive potential of artificial intelligence, or will it stifle the creative genius of this technological revolution? This exploration ventures into the uncharted territory where AI and copyright converge, navigating the complexities and opportunities that will shape the future of innovation, creativity, and intellectual property in Nigeria.

Artificial intelligence (AI) presents both challenges and opportunities for copyright law in Nigeria. Part of the **challenges** are:

³⁴ Section 32 of the NCA 2022 takes care of this. One of the conditions as provided by the law is that before an applicant shall not be granted a compulsory licence it must be proved to the satisfaction of the Commission that he had requested and had been denied permission by the owner of the copyright to reproduce and publish such work, or that he was, after due diligence on his part, unable to find the owner.

³⁵ [2001] 15 NWLR (Pt.736) 244.

³⁶ Nigerian Copyright Commission (2020) 'Copyright and the Digital Economy'.

- a. *Authorship and ownership*: AI-generated works raise questions about authorship and ownership, as the Copyright Act only recognizes human authors. AI-generated content raises questions about these because the Act vests copyright in the “author” of a work.³⁷
- b. *Originality and creativity*: AI-generated works may lack originality and creativity - essential requirements for copyright protection. AI-generated content challenges traditional notions of originality and creativity, as AI algorithms can produce works without human intervention. The Nigerian copyright law does not define the word ‘original’, but a reading of the text providing for the originality element suggests that the author must have spent some skill, labour, judgment or personal creative imagination to create the work.³⁸ In *Fraser v Thames Television Ltd*,³⁹ the court stated that “...the idea must have some significant element of originality not already in the realm of public knowledge. The originality may consist in a significant twist or slant to a well-known concept.
- c. *Fair dealing and exceptions*: AI’s data processing capabilities may test the boundaries of fair dealing and exceptions, potentially infringing on copyrights. Although fair dealing is statutorily recognized, the Nigerian Copyright Act does not also define the concept; thus, the application depends on judicial interpretation or the opinion of the court. Fair dealing allows for the limited, reasonable use of copyrighted works for illustration, criticism, or review, provided that the extent of the use is reasonable without causing undue harm to the copyright holder’s interests. In formulating the defence or exception to copyright, the overriding consideration is the public. In Nigeria, the fair dealing exception is mentioned in Part II of the Nigerian Copyright Act 2022, and it applies to all works protected in sections 9-13 of the Copyright Act. Consequently, as was held in *CCH Canadian Ltd v Law Society of Upper Canada*,⁴⁰

³⁷ NCA 2022, sections 28 and 108.

³⁸ *The University of London Press v University Tutorial Press* [1916] 2 Ch. 601, 608.

³⁹ [1984] QB 44.

⁴⁰ [2004] 1 SCR 339.

whether something is ‘fair’ will depend on the circumstance of each case; and the degree of use.

- d. *Enforcement and jurisdiction*: AI-generated content raises enforcement and jurisdictional challenges, as AI systems can operate globally.

On the flip-side of it, the opportunities, artificial intelligence presents for copyright include:

- a. *Efficient copyright administration*: Artificial intelligence can enhance copyright administration, streamlining processes like registration and royalty collection.⁴¹
- b. *Improved enforcement*: AI-powered tools can aid in detecting and preventing copyright infringement. This in turn can contribute to economic growth, as AI-driven industries emerge.
- c. *New creative possibilities*: Artificial intelligence can facilitate new creative works, such as AI-generated music or art, expanding the scope of copyright protection. Put simply, artificial intelligence-generated content enables new business models.

To address these challenges and opportunities, Nigeria can:

1. **Recalibrate the Copyright Act 2022**: The Nigerian Copyright Act 2022 is relatively new, it has barely seen the light of the day and yet needs to be amended. The need and call for amendment is part of the complexities which a law that falls short faces. It is a notorious fact that recalibrating a law by the National Assembly can be a time-consuming process due to several reasons: complexity, stakeholder engagement, research and data collection, drafting and revision, parliamentary procedures, political considerations, public input and consultation, and legal constitution review. These factors contribute to the time required to recalibrate a law, ensuring that the resulting legislation is well-crafted, effective, and serves the greater good. Nonetheless, it is suggested that the easiest way to amend the Nigerian copyright law would be to:

⁴¹ Emejulu, J. (2020), ‘Artificial Intelligence and Copyright in Nigeria: Challenges and Opportunities’ *Journal of Intellectual Property Rights*, 25 (3) 123-135.

- i. Streamline the process by identifying and eliminating unnecessary steps, reducing bureaucratic hurdles.
- ii. Clear goals and timelines by establishing specific objective, milestones, and deadlines to maintain focus and momentum.
- iii. Incremental updates by implementing gradual, incremental changes rather than attempting comprehensive overhauls.
- iv. Leverage technology by utilizing digital tools and platforms to facilitate public engagement, data collection, and drafting processes.
- v. Build on existing frameworks by drawing from successful models, international best practices, and existing laws to inform the recalibration process.
- vi. Expert input by engaging experienced professionals, such as legal experts, to provide guidance and support.
- vii. Flexibility and adaptability by remaining open to adjusting the approach as needed to address emerging challenges and opportunities.

By adopting these strategies, the National Assembly can navigate the recalibration process more efficiently, effectively, and with minimal delays.

2. Develop Guidelines and Regulations: Establish clear guidelines for AI-generated works, fair dealing, and exceptions. The development of guidelines and regulations is crucial for promoting clarity, precision, and standardization. By providing clear interpretations for AI-generated contents, guidelines reduce ambiguity and ensure consistent application, thereby promoting fairness and equality in legal outcomes. This clarity also enables individuals and organizations to anticipate and prepare for legal consequences, fostering predictability and accountability. Guidelines safeguard individual rights and copyright holders' rights, preventing abuse and ensuring that laws are enforced in a transparent and equitable manner. They also streamline legal processes, reducing disputes and delays, and facilitate public understanding and trust in the copyright law. Moreover, regulations empower authorities to enforce laws effectively and align domestic laws with international norms and agreements. This adaptability will enable

the Nigerian copyright law to remain relevant and address emerging technological issues. Effective guidelines and regulations are essential across various areas, including intellectual property; by establishing comprehensive guidelines and regulations, copyright landscape promote justice, stability, and economic growth. Overall, developing guidelines and regulations is vital for maintain a robust, efficient, and just copyright framework that supports social and economic progress.

3. **Foster Collaboration:** Encourage collaboration between creators, AI developers, and copyright holders to promote innovation and respect for intellectual property rights. One may ask: ‘how can copyright law do this?’ Copyright law fosters collaboration by striking a delicate balance between protecting creative rights and facilitating the sharing of knowledge and ideas. Through its provisions, copyright law incentivizes creators to collaborate, innovate, and disseminate their works. By safeguarding intellectual property rights, copyright law encourages creators to share their work, knowing their ownership and control are protected. This assurance enables collaborators to contribute valuable ideas and expertise, secure in the knowledge that their contributions will be recognized and rewarded. Copyright law also promotes collaboration through open-source and open-content licensing models, such as Creative Common. These licenses allow creators to voluntarily relinquish some rights, enabling others to use, modify, and distribute their works. By providing a framework for intellectual property protection, copyright law fosters collaboration, driving innovation, artistic expression, and knowledge dissemination.

Artificial intelligence-generated content is revolutionizing music, art, and literature in Nigeria, raising important copyright questions. Thus, imagine a future where artificial intelligence-generated content in Nigeria is not only recognized but celebrated as a unique form of creative expression. The Nigerian Copyright Act is amended to include “AI authorship” as a legitimate category, acknowledging the innovative potential of human-machine collaboration. In this scenario, Nigerian musicians, artists, and writers embrace AI tools as creative partners, pushing the boundaries of their craft. AI-generated beats, visuals, and literature are showcased in dedicated festivals, exhibitions, and

publications, attracting global attention. To ensure fairness and transparency, a new regulatory framework is established, providing guidelines, for AI-generated content, ownership, and royalties. This framework encourages collaboration between AI-developers, creators, and copyright holders, fostering a thriving creative ecosystem.

As a result, Nigeria becomes a hub for AI-driven creative innovation, attracting international investment, talent, and recognition. The country's cultural landscape is transformed, reflecting the vibrant diversity of human-AI collaboration. In this future, the question will no longer be "who owns the rights?" but "how can we harness the creative potential of AI to enrich our culture and society?"

4.1 Copyright infringement and Enforcement in the Digital Age

Copyright infringement is the appropriation, use, or production of copyright protected material without legal justification or authorization of the copyright owner where such authorization is required. Infringement of a copyright is typically against the right holder who is the creator or owner or both of the work. Copyright infringement is considered a serious violation of the owner's rights because such an owner or group of owners hope to reap some financial gains for the efforts dispensed.⁴² By section 36 of the Nigerian copyright Act, copyright is infringed by any person who without the authorization of the owner of the copyright any of the things listed in section 9-13 of the Act.

Copyright infringement and enforcement in the digital age pose significant challenges in Nigeria. The rise of AI-generated content, online platforms, and digital market places has created new avenues for copyright violations. In Nigeria, like other countries of the world, the Copyright Act 2022 prohibits unauthorized reproduction, distribution, and public display of copyrighted works – Part IV⁴³ -; however, enforcing these rights in the digital realm is daunting.

⁴² *Twentieth Century Fox Film Corporation and Another v Newzbin Ltd* [2010] EWHC Ch. 608.

⁴³ Sections 36-43.

In *Shell Petroleum Development Co. Ltd v Osaro*,⁴⁴ the court acknowledged the need for effective copyright enforcement in the digital age. The judge emphasized the importance of balancing copyright protection with technological advancements. Internationally, the WIPO Copyright Treaty and the Berne Convention provide frameworks for copyright enforcement in the digital space. The US Digital Millennium Copyright Act and the EU's Directive on copyright in the Digital Single market offer additional guidance. It thus proffered that to enhance copyright enforcement against infringement in Nigeria, the following measures can be adopted:

- a) **Digital Rights Management System:** Implementing robust digital rights management systems to track and control copyrighted contents online.
- b) **Online Platform Liability:** Holding online platforms accountable for copyright infringement on their platforms, as seen in the US case of *MGM Studio Inc. v Grose Ltd*.⁴⁵
- c) **Judicial Capacity Building:** Educating judges and legal practitioners on digital copyright issues to ensure effective enforcement.
- d) **Collaboration and Awareness:** Fostering collaboration between copyright holders, online platforms, and government agencies to raise awareness about digital copyright infringement.

5.0 Summary of Findings

This paper examined the role of copyright in promoting technological advancement in the wake of Artificial Intelligence (AI) in Nigeria. Key findings include:

- i. Ambiguity in the Nigeria copyright law which lacks clarity on AI-generated content ownership.
- ii. Inadequate protection because the current copyright law fails to address AI-specific copyright issues thereby hindering innovation.

⁴⁴ [2017] 12 NWLR (Pt 1588) 247.

⁴⁵ [2005] 545 US 913.

- iii. Enforcement difficulties which has encouraged online piracy and copyright infringement thrive due to inadequate or near non-existent digital management.
- iv. Judicial inertia as result of the lacuna in the Nigerian copyright law as it affects AI-generated content. The advent of AI has exposed a critical lacuna in existing copyright frameworks. Judicial inertia in addressing AI-generated creative content has resulted in a void that hampers innovation and artistic expression. The challenge lies in devising novel legal paradigms that reconcile technological advancements with traditional notions of intellectual property protection.

5.1 Recommendations

To harness the potential of digital innovation and AI in Nigeria, while protecting creative rights, the following recommendations are proposed:

a. *Legislative Reforms:*

- i. Recalibrate the Nigerian Copyright Act to:
 - a) Recognize AI-generated content as distinct category
 - b) Clarify ownership and rights of AI-generated works.
 - c) Provide guidelines for AI-driven creative collaboration
- ii. Enact specific legislation addressing online copyright infringement and digital rights management.

b. *Regulatory Framework*

- i. Establish a Nigerian Digital Rights Management office that will collaborate with the Nigerian Copyright Commission to oversee online copyright enforcement.
- ii. Develop guidelines for AI-generated registration and licensing.
- iii. Introduce regulations for online platforms to prevent copyright infringement.

c. *Judicial Capacity Building*

- i. Provide training for judges and legal practitioners on digital copyright and Ai-related issues.
- ii. Establish specialized intellectual property courts

d. *Industry Collaboration and International Cooperation*

- i. Foster partnership between AI-developers, creators, and copyright holders.

- ii. Encourage open-source initiatives and collaboration licensing models.
- iii. Develop industry standards for AI-generated content use and distribution.
- iv. Engage with international organisations to harmonize digital copyright standards.
- v. Collaborate with foreign jurisdictions (US, UK, EU) to address cross-border copyright issues.

e. Technological Solutions, Public Awareness, Education and Research

- i. Promote block chain-based copyright registration and verification
- ii. Develop AI-powered copyright infringement detection tools.
- iii. Implement robust digital rights management systems.
- iv. Conduct public awareness campaigns on digital copyright and AI-generated content
- v. Educate creators on copyright protection and AI-driven opportunities.
- vi. Integrate digital copyright and AI-related courses into educational curricula
- vii. Conduct research on AI-generated content and digital copyright implications.

f. Implementation Roadmaps

- i. Short-term (6-12 months): Legislative reforms, regulatory framework development.
- ii. Medium-term (1-2 years): Industry collaboration, public awareness campaigns.
- iii. Long-term (2-5 years): Judicial capacity building, technological solutions implementation

6.0 Conclusion

The advent of artificial intelligence has brought about unprecedented opportunities for digital innovation and technological advancement in Nigeria. However, the increasing use of AI-generated content has raised complex questions about the role of copyright law in protecting

intellectual property rights. This article has argued that copyright law has a crucial role to play in promoting innovation and creativity in the digital economy, but the current legal framework in Nigeria is inadequate to address the challenges posed by AI.

To address these challenges, we propose a multifaceted approach that involves reforming the copyright law to recognise AI-generated content, providing exemptions for certain uses of copyrighted, and promoting education and awareness about intellectual property rights. We also recommend that policymakers and stakeholders engage in ongoing dialogue to ensure that the legal framework keeps pace with technological advancements.

By implementing these recommendations, Nigeria can foster innovation and creativity, protect intellectual property rights, and contribute to global discussions on artificial intelligence and digital copyright. It is thus very essential that Nigeria's copyright framework must adapt to AI-driven technological advancements by addressing ambiguity, promoting collaboration and strengthening enforcement.

Ultimately, the future of copyright law in Nigeria will depend on its ability to balance the need to protect intellectual property rights with the need to promote innovation and creativity in the digital economy. By adopting a forward-thinking and flexible approach, we can ensure that copyright law continues to play a vital role in driving economic growth and development in Nigeria.