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Research Article

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The impact of artificial intelligence on intellectual property rights in Albania: Between innovation and regulatory challenges

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Abstract

Artificial Intelligence (AI) has entered almost every aspect of contemporary life, impacting technology, healthcare, education, and also the intellectual property (IP) sector. All over the world, AI has been integrated towards the creation of original works in art, music, programming and other creative fields, challenging traditional concepts of intellectual property and bringing new challenges to the existing IP legal framework. This issue is particularly sensitive not only in Albania, where legislation and judicial practice are not yet harmonized with the technological challenges of the digital age, but also in the international context. Albania, aiming to integrate in the European common market, is faced with the need to harmonize the legal framework and institutions in the face of this new technological reality. This paper analyzes the impact of AI on the creation, management and protection of intellectual property rights in Albania – addressing issues such as the authorship of AI-generated creations, the use of protected data during model training, and the lack of technical and legal capacity to address cases involving advanced technology. Through a comparative analysis with European practices, concrete steps are suggested for the impact of AI in the creation, management and protection of intellectual property rights in Albania and provide recommendations for legal regulation in line with international standards and the directions being followed by the EU.

Keywords: Artificial Intelligence (AI), intellectual property (IP), works, technology, legal framework.

1. Introduction

AI-generated creations have challenged the traditional concept of authorship, as many of them do not have a human author in the legal sense, making it difficult to apply for protection through copyright or patents (Upadhyay & Rathee, 2020). Seen from this perspective, on the one hand, AI offers advanced tools for patent research, market analysis, and the detection of intellectual property violations, but on the other hand, it poses a risk of rights violations through the mass production of content that resembles, imitates, or appropriates existing works by giving them a

perception or value in digital form. Albania does not yet have a technical and legal infrastructure adapted to these challenges, and the lack of clear legal definitions for non-human authorship leaves the country vulnerable to these global developments. As emphasized by authors Upadhyay & Rathee (2020) it is essential that developing countries act with vision in addressing these challenges to maintain a balance between innovation and protection of rights.

The Albanian Administration is using AI in the EU Membership Process by automating the transposition of the acquis communautaire with AI. The adopted AI platform aims to automate the process of collecting, categorizing, translating and approximating Albanian legislation with that of the EU. The National Information Society Agency (AKSHI) in collaboration with OpenAI experts are integrating AI in the negotiation process with the EU, easing not only the fiscal burden of the translation process of over a quarter of a million pages from the acquis, but also shortening the time of this process in effectively fulfilling the membership criteria.

2. The role of AI in creativity and the impact on authorship

AI is being widely used in the creation of new content, texts, music, graphics, images and designs. Algorithms such as ChatGPT, DALL·E and Copilot no longer serve simply as auxiliary tools, but as co-creators or even independent creators generating new content without direct assistance from the human author. Many different authors ask the fundamental question: Who is the author of a work created by AI? Albanian copyright legislation provides protection only for natural persons, leaving a gap for works created by or with the help of automated systems. This uncertainty directly affects the validity of these works in the market and the enforcement of the rights associated with them (Upadhyay & Rathee, 2020).

In the Albanian context, Law No. 35/2016 "On Copyright and Related Rights" (as amended and updated with EU Directives), provides that only natural persons can be authors of works, automatically excluding works that do not have a "human creator". This creates a legal vacuum for AI creations that do not have a traditional author. Çupi (2024) in an analysis on the ethics of using AI in the media, emphasizes that the lack of legal clarity in Albania regarding AI-generated works creates an environment where manipulation and lack of transparency in authorship become serious problems for journalism and public information.

At the international level, scholars such as Halwachi (2024) have analyzed that most legislations in the EU and the US base authorship on the concept of "human intellectual creativity" and do not recognize AI works as protectable, in the absence of creative human intervention. Malikova (2023) in her question: "Can AI be an author?", notes that the EU approach remains conservative, giving priority to human intervention in creation for the purposes of legal protection.

An alternative approach is proposed by author Kucukali, who suggests that, in the absence of the possibility of attributing authorship to AI, a possible path is to adopt a form of "neighboring rights" for technological producers or users who initiated the

creation (Kucukali, 2022).

In addition to Kucukali's approach, other researchers have proposed several alternatives for regulating authorship and rights over creations generated by artificial intelligence (AI). Many scholars, such as Gervais (2020) and Liu (2021), through the "attribution to the human creator" approach support the idea that authorship should always be attributed to a natural person, usually the individual who programmed, trained, or made the creative choices in the process of using the AI. This approach is based on the argument that the system does not have "consciousness" and cannot have a creative intention, so any act of creativity must be associated with a human legal entity. This approach is the same as Article 13 (Authorship) of Law No. 35/2016 "On Copyright and Related Rights" (as amended and updated by EU Directives). The case Infopaq International A/S v. Danske Dagblades Forening (C-5/08) clearly established that a work must be "the original creation of the author" – that is to have a human origin. The US Copyright Office also refused to register Zarya of the Dawn (2023) as a work entirely generated by AI.

Abbott (2020) and Pila & Torremans (2021) taking the "institutional ownership pragmatism" approach suggest that, in cases where the creation is carried out within a professional environment (e.g. a company or research institution), copyright should automatically pass to the legal entity that financed, developed and controlled the process. This avoids legal vacuums and provides certainty for investors and third parties. This approach is provided for in Article 15 (Invention by an employee) of Law No. 9947, dated 7.7.2008 "On Industrial Property", as amended. Although Article 15 does not specifically mention AI, it still includes those inventions generated with the help of AI. Companies such as DeepMind in the UK stipulate in contracts that any work produced with the company's means belongs to the latter. In international practice, one can take the Japanese Copyright Act, which allows the rights to works created within the framework of the work to remain the property of the company, regardless of the level of human contribution. In any case, a distinction must be made between the property rights that pass to the company or research institution from the personal non-property rights that in any case are attributed only to the inventor.

In addition to Kucukali, various scholars have proposed different alternatives to address the legal gap on the authorship of works generated by artificial intelligence (AI), among which authors Ramello (2021) and Senftleben (2022) argue through their approach of "protection through related rights/sui generis" that AI creations can be protected by a special regime similar to the rights of database producers or phonogram rights. This form does not attribute "authorship" to AI, but protects the financial and technological investment of the party that made the creation possible. This approach is aligned with Article 11 (Database) as well as the rights of phonogram producers Article 112 of Law No. 35/2016. Directive 96/9/EC on databases protects significant economic investment, not necessarily creativity – a logic that can be extended to AI. The Australian Copyright and AI Practice (2021) recommends sui generis right for the protection of AI creations.

Hatten (2019) and Grimmelmann (2020) propose a "forced public domain" approach

where creations generated primarily or exclusively by AI are not protected by copyright at all and immediately enter the public domain. According to them, this avoids artificial monopoly on content created by automated systems and encourages open innovation. In Albania, the lack of human authorship prevents a work from being registered by the General Directorate of Industrial Property (DPPI) and considered part of the public domain, thus having the same approach as the EU on this issue. In the US, the Public Domain Default Rule applies only to creations without a human author.

Burk (2021) proposes a hybrid approach model (human-in-the-loop), where protection is granted only if the creation contains substantial intervention by a human at key stages (aesthetic choices, content decision-making). In this way, the creation is treated as a collaboration between AI and a human, giving the latter authorship. This approach is similar to Translation as a new work. In Albanian law (Article 9 "Derivative Works", Law no. 35/2016) and that of the EU, translation is considered a derivative work that is protected by copyright, but only if it contains human creative contribution. If the translation is carried out with AI and then revised, corrected and adapted by a (human) translator making original linguistic and stylistic choices, authorship will be recognized to the human translator. Germany accepts co-authorship if the human contributions are distinct and substantial. In Britain, section 9(3) of the Copyright, Designs and Patents Act 1988 considers the author to be the person who makes the necessary arrangements for the creation of the work.

The above highlights the need for legal clarity, which is not just an academic issue, but also a practical one. If not addressed in time, this ambiguity could hinder the development of the digital creativity market, creating uncertainty for artists, developers, companies, scientific research institutions, as well as for institutions that administer intellectual property rights.

3. The impact of AI on IP rights infringement

AI also represents a new dimension of risks for IP infringement. AI training models often contain copyrighted material without specific permission. This raises questions about the legality of training processes and the content that is produced as a result of them. In addition, AI, by reproducing the stylistic structures or forms of existing works, makes it difficult to distinguish between the original and the copy in their final products.

Many AI systems use massive datasets containing copyrighted works, collected mainly from the internet and without specific permission from the legal holder of these rights. In the EU, this may constitute a violation of Articles 2 and 3 of Directive 2001/29/EC unless an exception applies, such as "text and data mining" under Directive 2019/790/EC (DSM Directive). The case Getty Images v. Stability AI (2023), is one of the examples where the claimant accused the use of protected images for training a generative model without a license. Although there is no judicial precedent in Albania yet, the use of protected content in AI training may conflict with Articles

15–17 of Law No. 35/2016 "On Copyright and Related Rights", as amended.
As mentioned above, AI can generate content that reproduces the structure, style or other distinctive elements of existing works. The use of techniques such as "style *transfer"* can result in creations that are almost identical to the source works, making it difficult to prove infringement. The numerous discussions at the EUIPO on AI-generated images that imitated the style of well-known artists raised questions about the protection of style as an element of copyright. In Albania, although an AI that generates music by imitating protected songs, even without using identical notation, can be considered an infringement of musical "expression" under Article 8 of Law No. 35/2016.
In addition to copyright, AI can produce logos or visual products that are similar or identical to registered trademarks or designs, infringing the rights held by legal entities. AI that generates a logo similar to a registered trademark may constitute a violation of trademark legislation and lead to consumer confusion, misleadingly leading them to believe that the product comes from the original creator or manufacturer. Article 148 "Right to priority" of Law No. 9947, dated 7.7.2008 "On industrial property", as amended, protects trademarks against imitation or reproduction, including any digital form.
If an AI-generated work turns out to be very similar to a protected work, proving infringement requires identifying the source of the data and how it was used during training. Many AI companies do not make their full training datasets public, making legal investigation and proof difficult. In the context of the EU AI Act (AI Act), there is much debate about the transparency of large language models (LLMs).

4. Current legal and institutional situation in Albania

The Albanian legal framework is based on Law No. 35/2016 "On Copyright and Other Related Rights", as amended, which sets out the rules on authorship, economic and moral rights of the author, and related rights. This law is harmonized with several EU directives, but does not contain specific provisions on works created by artificial intelligence (AI), as well as Law No. 9947, dated 7.7.2008 "On Industrial Property", as amended, which covers the protection of trademarks, registered models, inventions, patents, geographical indications, designs and other elements of industrial property. This law also does not directly address issues related to products generated by AI. There is also a lack of technological capacity and sufficient knowledge within institutions such as the Agencies for the Collective Administration of the Rights of Performing Artists in Albania and the General Directorate of Industrial Property (DPPI) to handle modern cases related to technologies such as AI.
Although Albanian legislation provides a clear basis for the protection of intellectual property created by humans, it lacks a specific provision that addresses creations 100% generated by AI or that clearly defines the criteria for co-authorship between humans and AI. This creates legal uncertainty, especially in cases where human contribution is minimal or questionable, by not clearly defining the status of creations

entirely or partially generated by intelligent systems.
The analysis of the Albanian legal and institutional framework in relation to European Union standards shows the existence of a number of gaps that hinder the effective handling of intellectual property (IP) issues in the context of artificial intelligence (AI). These gaps relate to both the normative basis and the technical and administrative capacities of the responsible institutions.
According to Dervishi (2022), "most Albanian public administrations do not have the capacity to conduct technical expertise on the originality and traceability of content created by advanced technological systems". Shabani (2021) emphasizes that "the lack of provisions dedicated to new technologies creates a legal vacuum that is often resolved only through judicial interpretation, which may not always be sustainable". This problem is also evident in international studies where author Gervais (2020) emphasizes that many legal systems around the world, including EU countries, still do not have a unified position on AI authorship, while Abbott (2020) argues that without specialized training and analytical tools, institutions cannot guarantee effective IP protection in the AI era.
There is currently a lack of specific protocols and guidelines on how to deal with AI-generated works. There are no guidelines for their registration, verification or licensing, and review practices remain ununified. Kola (2023) notes that "institutional transparency is essential for building trust in copyright registration and protection processes, especially when it comes to new technologies". In the EU, this problem is partly addressed by the European Union Intellectual Property Office (EUIPO) guidelines on digital content and the use of AI in design and trademarks.
Albania does not yet have a legal framework harmonized with standards, transparency, traceability and accountability requirements set out in the EU Artificial Intelligence Act (AI Act). This discrepancy creates a risk that the country will lag behind in integration with the European single market, especially in the field of IP. Senftleben (2022) emphasizes that the new EU standards not only affect the technical aspects of AI, but also the way laws should be structured to guarantee the protection of authors and investors in the digital environment.

5. Comparison with European practices and recommendations

The European Union has begun to address these challenges through documents such as the " White Paper on Artificial Intelligence" (2020) and Directive (EU) 2019/790, discussing whether works created by AI can be protected and how AI training based on copyrighted data can be regulated. Albania, in its accession process, should align its legislation with these standards, recommending:

- Introducing categories of crimes created by AI into legislation.
- Training of lawyers, judges and institutions about AI and IP.
- Collaboration with universities and the private sector to identify and develop tools that detect automatic IP infringements.

The European Union has taken consistent and structured steps to address the

challenges posed by artificial intelligence (AI) in the field of intellectual property (IP). The strategic document "White Paper on Artificial Intelligence" (European Commission, 2020) presents a two-pronged approach: promoting innovation and ensuring the protection of fundamental rights, including copyright. This document highlights the need for clear rules on legal liability and for mechanisms that ensure traceability and transparency in the way AI is trained and used.

Another key instrument is Directive (EU) 2019/790 on Copyright in the Digital Single Market (DSM Directive), which has introduced new provisions on text and data mining. These provisions allow research institutions, universities and businesses to use protected material for training AI models, within the limits permitted by law, ensuring a balance between the public interest in innovation and the protection of copyright. According to Geiger, Frosio & Bulayenko (2018), this EU approach is a balanced model that can reduce conflicts between AI developers and rights holders.

In the Albanian literature, Shabani (2021) emphasizes that the harmonization of Albanian legislation with the EU acquis communautaire is not only a formal obligation of the integration process, but also a prerequisite for ensuring that IP protection is effective and competitive in the European internal market. This author argues that current gaps in Albanian law, especially the lack of provisions for AI-generated creations, may bring legal uncertainty and hinder the development of creative industries.

On the other hand, Senftleben (2022) notes that the EU is orienting its legislation towards an integrated model, where the protection of creative investments and the right to access data are not opposed, but coexist through balanced rules. This model is expected to have a direct impact on aspiring countries such as Albania, which need to harmonize laws not only to meet the accession criteria, but also to ensure a favorable environment for innovation.

Furthermore, documents such as the recently adopted EU AI Act include provisions on the transparency of AI systems and on the obligation of operators to declare the use of AI in the creation of content. According to Pila & Torremans (2021), these requirements have a direct impact on the way IP protection will be addressed in the next decade, as they will help identify infringements and determine authorship.

Albania, on its path to EU membership, needs to take clear steps to align its legislation with these standards. This includes not only normative changes – such as introducing categories of AI-generated crimes and defining rules for text and data mining – but also increasing institutional capacity to implement these rules. Without investment in tracking technology and training for lawyers, judges and public officials, the adoption of European standards will remain largely formal and non-functional.

6. Conclusion

The intersection of artificial intelligence and intellectual property in Albania represents a challenging and promising terrain. By anticipating the impact of AI now, Albania can create an advanced legal system that is in line with global trends.

The intersection of artificial intelligence (AI) and intellectual property (IP) in Albania represents a complex challenge, but also a great opportunity for development. Faced with a technology that is evolving at a rapid pace, the Albanian legal framework remains partial and not adapted to fully address the creations generated by AI. Currently, the Albanian law on copyright and industrial property recognizes only human authorship and does not contain specific provisions on works created by intelligent systems.

In addition to the normative gaps, institutional capacities are also limited, including the lack of technological tools and specialized expertise to identify, verify and protect AI-generated content. There is also a lack of clear guidelines and protocols on how to register and license these works, while the lack of harmonization with EU standards, including the AI Act, creates a significant gap between Albania and the most advanced European practices.

On the other hand, the experience of the European Union offers a good model to follow. Documents such as the "White Paper on Artificial Intelligence" and Directive (EU) 2019/790 on Copyright in the Digital Single Market show that it is possible to achieve a balance between fostering innovation and protecting copyright. European practices on text and data mining, transparency in the use of AI and the balanced approach between creative investment and access to data provide a valuable guide for Albania.

To meet these standards and ensure sustainable development, Albania should undertake an integrated approach that includes: introducing categories of works created by AI into the law, clearly defining authorship and co-authorship, adapting exceptions for text and data mining, increasing transparency and traceability, and training lawyers, judges and public administration. Also, cooperation with universities and the private sector to develop tools that automatically detect IP violations will strengthen the applicability of the law in practice.

If these steps are taken in time, Albania has the opportunity to create a modern legal system, harmonized with European standards, and position itself as a country that not only follows global developments in the field of artificial intelligence, but also actively contributes to determining its legal and technological future.

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