Vilnius University Faculty of Law

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Muhammad Husnain

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Copyright ability of Outputs: A Comparative Study of EU and US Approaches

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Supervisor: Associate Prof. Dr. Paulius Jurcys

Reviewer: Prof. Dr.Justinas Drakšas

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Abstract

This paper undertakes the comparison of copyright laws between the European Union (EU) and the United States (US). That is why this paper examines the nature of these differences, key reasons for giving the emphasis to the international conventions, such as the Berne Convention, affecting both world regions. From the findings it could be deduced that while EU and US copyright laws share many features they also possess special features conditioned by historical, cultural and legal factors. These differences are usually based on dissimilarities in the principles of copyright, including moral rights, the part played by case law instead of statute law, and other principal differences. Furthermore, the paper discusses the relationship of the EU and US copyright law with the copyright systems of other countries as well as how the economical perspective and the legal systems in the EU and US influence the laws regulating copyrights. This dissertation aims at examining originality in the U.S.A with especial reference to the history of the doctrine and the effects of the Feist decision on the present standard in the United States. This paper discusses how the originality requirement was established, in case law, statutory law, and in relation to social, economic, and technological advancements. It also reviews and considers the concept of originality in the European Union, in order to compare and contrast it with other countries to define some possible ways to reach for a greater international convergence of the laws concerning copyright. Based on these results, it can be noted that the significance of the concept of independent creation with a certain degree of creativity for the purpose of originality still remains in the United States, However, indications appear about the extension of the discussion of the general concepts of the copyright legislation in this country. However, similarities existing between originality standards of USA and EU also indicate towards future global unity of the situations of copying law.

Keywords: Copyright law, European Union (EU), United States (US), Originality requirement, Comparative analysis, Legal traditional

Introduction

Copyright is a universal legal principle used to protect literary and artistic creations, inventions and designs. It enables the owners of the creation to regulate and gain from their work simultaneously and guarantees creativity advancements and cultural growth. However the concept of copyright ability the criteria which define what is protected by the copyright laws is different all over the world. The contour of this research revolves on the analysis of the policy positions of the European Union (EU) and the United States (US) on the copyright protection of creative works more so in the face of advancing technologies and other emerging forms of creativity.

As this paper has explained, copyright law acts as an intermediary for the creator, the consumer and the public in both the European Union and the United States. However, different tensions between the two systems are based on different philosophical views of the EU and the US. Unlike the US for instance, the EU chiefly propounds moral rights, which holocausts with the profounditude of every individual to his creation. However, in the case of the US, this criterion is as important as the pecuniary one, which means that Works selected by Americans are valued not only for their economic characteristics but for stimulating economic development. The differences presented in this paper affect how each system defines the extent and entities capable of qualifying for copyright protection.

The advancement of the digital technologies and artificial intelligence (AI), these legal frameworks have been shaped. Once again, given that generative AI tools like DALL-E and

Midjourney allow for the generation of results that are highly unoriginal at best and otherwise utterly indistinguishable from the collective artistic corpus — two of the key prerequisites to gaining copyright protection in the first place. This raises critical questions: Should works produced at least in part by AI be considered for copyright? If so, then the rights are belong to whom, the creator, the user or the AI developer? Consequently, the following questions have raised questions that continue to generate discussion and divergent policy action in the EU and US, to date.

This work is important in order to identify how the two areas are changing copyright legislation in response to new technologies. Currently, the EU is still in the process of narrowing down the values attributed to the personal and cultural aspects of the creation while the US has started its debate on economic effects of AI creations. Through the analysis of these approaches, this work seeks to reveal the advantages and limitations of each of the systems under study and discuss

potential improvement upon which transformative change could build to suit the needs of today's and tomorrow's learning environments.

Furthermore, this study will take a look at how through treaties like the Berne Convention, there is process of legal harmonization of copyright law across countries. Due to the globalization of most creative industries and digital markets, a comparative analysis of the EU and US approaches can enrich the public discussion on the development of fair and efficient copyright regimes.

This study will also extend the current state of knowledge of the opportunities and constraints of the current copyright systems and its outcomes in both zones and alert policymakers, legislatures, scholars, creators, and industries about those. In this way, the main differentiations enable stakeholders to progress towards more liberal and transformative copyright frameworks which preserve creativity and innovation together with technology.

Main Research questions

1. What are the basic requirements for copyright protection?
2. Can AI-generated works qualify for copyright protection?
3. How do courts in the USA and EU interpret disputes involving AI-generated works?
4. What is the future of copyright in an AI-driven world?

Additional Research questions

1. Who owns the rights to works created with AI tools?
2. How do existing copyright laws handle human involvement in AI-generated works?
3. Should new legal frameworks be created for AI-generated works? 4. What is the role of international agreements in harmonizing AI-related copyright laws?
5. How do creators perceive ownership and rights in AI-assisted works?

Scope of this thesis

This paper aims and attempts to offer a comparative analysis of the copyright systems in the European Union (EU) and the United States (US). They also strive at pointing out the shortcomings and or advantages of each in the protection and the creative ability of authors. The paper focuses on comparing how these two systems address copyright, and what this teaches about their effects on culture, law and the economy. Copyright has the goal of safeguarding authors' protections and guaranteeing proper remuneration for his or her creation. But there is a difference between the EU and the US recognitions. (Bently & Sherman, 2009)

New technologies and social networks have created copyright challenges as several subjects of copyright law, including music, photographs, internet piracy, and AI. Both regions are in the process of redesigning their concepts of copyright to cope with such issues as digital reproduction which is a subject of discussing nowadays, AI generated content, copyright violation in the frame of digital environment. This paper contrast the two jurisdictions on how they proceed in updating their copyright laws, protect creativity, and balance change with technology.

In the EU, the emphasis on moral rights is based upon the cultural model which recognizes the author's stake in the material. Thus, in the US, the focus is on economic rights that promote efficient exploitation of commercial potential of the created works.

Under the Berne Convention, both the EU and the US are abiding with the minimum legal requirements on the protection of copyright. This paper aims at assessing whether these regions perform well or poorly in implementing international treaties and where they stand. In light of this research, conclusions offer the world enhanced ideas on how to achieve greatest shared solutions that collectively lead to harmonization of copy right laws with better protection for all creative works. Copyright's protection has to continue its role in an increasingly globalized economy buoyed by technologically offerings. It is useful to compare the functioning of the EU and US systems in order to define potential possibilities for further development the research also tries to find the optimal approach to creators' rights protection and the access to the cultural and educational materials. The study recommendations provide positive clue to the policymakers and legal scholars as on how to re-engineer the copy right laws in order to tame the dynamics of the digital economy (Litman, 2001)

Thus, the present work not only responds to a bandwidth of current Copyright problems within its comparative analysis of both EU and US copyright systems but also contributes to build a well- proportioned and harmonized concept of Copyright and its by-products regarding a

globalised and digitalized world.

Objective of the Study

With this in mind, the principal objective of the present work is to consider how the EU and the US copyright legal systems affect the 'capacity of output' of creative works. This is loosely defined as the complete ability of a work to secure and staking its rights from copyright laws based with the characteristics of process, originality, and the adherence of protocols provided by each country's legal system. In general, this work is aimed to categories the quintessential legal principles of the copyright protection law in two venues: the EU and the US. This involves the appreciation of the philosophy for each system whether it is the rights of the creator as in EU or the public interest and economic development for as in the US.

Hence, in that logic how the rights of the copyrights relate to such works becomes rather very critical as the technology advances. This research proposal will also examine how EU and the US address some of the challenges that are related to basic content, software and other digital media copyrights. This treatment will also in relation to internet, digital copying and other advance exploited technology as well as new technologies such as artificial intelligence. The principle of "Territoriality" means that proves that Copyright laws are only effective in the territory of that particular country only and this present research work is also going to examine how these has impact on creators/ owners of Copyrights all over the world.

Towards the end of the study, recommendations on how the EU vs the US need to alter their copyright legislations. Some of these suggestions may be oriented at achieving better balance of rights of creators and users, with the special regard to the issues of access to the knowledge and cultural goods as well as to the new technologies and to the global challenges. Ficsor, M. (2014).

Research Methodology

The method employed in this work is the theoretical comparative approach comparing the EU and US copyright legislation. For this purpose this approach will allow making a comparative analysis concerning the ways the indicated legal systems regulate the 'strength of output' of the created works. The fact that the part of the planned methodology will also be efficient and allows to potentially provide the most balanced analysis will also be provided by the division of the methods into several major stages. The first step in the method will therefore be a review of literature. This will involve breaking down subject to criticism works under academic books, scientific journals, case laws, and other legal works concerning the Copyright Act in the EU and the US. This paper will focus on historical development of copyright, principles such as originality and fixation, and economic and moral rights of the two countries. It will also aim at reviewing earlier literature on the impact of individual aspects of digital technologies on copyright protection. Bently, L. & Sherman, B. (2009).

In this step legal statutes, international treaties including Berne Convention, court decisions will be analyses. This will entail conducting a legal research analysis of the fundamental legal tools that have captured the copyright laws within the EU Region and the United States of America, hence; The study will also look at the case laws from the two regions to determine how courts have handled and applied the norms of copyright especially in as far as the new inventions in the technological arena and the electronic press is concerned. Since there is a need to compare the: cultural and legal values that form part of this study influencing the development of copyright law within the EU and the US shall warrant the use of qualitative research approach. It will also expect one to consider how legal systems in those areas work into shaping the copyright law such as the EU that has much to say on moral rights while the U.S has much to say on economic use of a work . Ficsor, M. (2014).

Information, regarding the application of the copyright law, will be collected with the help of copyright offices, legal databases, and WIPO. These will include; piracy rates and the available legal recourses, the foreign treaties influences including the Berne Convention After the above legal and qualitative comparison, the results will be compiled to make conclusions In as much as comparing the EU and US copyright laws. The research will explain and discuss major concern and issues as well as the implication of change and agenda for reform in both regions, in So regard to facets of transition to digital environment and international unification of the copyright, Litman, J. (2001).

Therefore, Qualitative and Legal Research Analysis, and Comparative methods are research methodology employed for this study to compare the EU and US Copyright protection. With reference to theoretical concepts in copyright law and how legal systems work in these two areas in terms of 'output capacity' of creative works the study seeks to provide an indication as to how the two jurisdictions view the protection of copyright. Liu, Y. (2009).

Originality

Novelty is one of the principles of copyright law, By virtue of which an author qualifies for the protection of his work. This thesis was derived from abstracting the original work through various journals and articles. This paper aims to the contrast in how originality is defined and implemented within both the United States and the European Union while also taking into consideration that these two judicial systems belong to two entirely different legal as well as cultural worlds. This distinction holds a vital place for understanding the way concepts of copyright work and the implementation of the copyright laws.

Chapter 1 Copyrightability of Outputs

1.1 Introduction

1.1.1 Definition of AI Systems

In contrast, the current study used a definition provided by the High-Level Expert Group on Artificial Intelligence that define AI systems as software, and sometimes hardware, that have been programmed by humans to operate in the physical or digital world. These systems are based on data in order to be aware of their surroundings and reason in order to reach specific objectives. AI systems may work by symbolic rule and learning models or by artificial intelligence ones.

The Fourth Industrial Revolution has brought about increased development especially in the area of Artificial Intelligence (AI) which has revolutionized many fields of society. Currently, AI technologies generate arts in various sectors like music and prose, fine art, and media journalism. Such examples like AIVA, the Composer as an AI, shows how machine learning can be trained with a database of thousands of pieces, 30 thousand in AIVA's case, and compose their own music. Correspondingly, recently many people started paying attention to new AI tools like DALL·E, Midjourney, and Chat-GPT giving abilities to create art, texts, and

any other content. Integration of AI as the part of physical, digital, and biological space causes concerns for creators and applies questions to an IP law. In detail, monopoly rights referred to copyright gets into a problem to encompass AI derived creative works.

The Berne Convention which categorizes a "work" as a work of literature, science or art is the first approach to using copyright as an analytical tool. However, it is an important point to note an idea, work or creation that will fit in any of the above categories does not automatically mean it is eligible for copyright. A clear divide prepared here can be observed between works that are exclusively AI authored (where the human provided only the prompt that triggers the AI process) and works that are AI aided (in which the human plays an active role while employing AI tools).

Currently, most jurisdictions do not extend copyright protection to AI generated works mainly because of lack of human ownership of the AI programed. For that matter, such works may be owned by neighboring rights or other free legal regimes that would seek to regulate them. AI created works, in contrast, those wherein human contribution is limited to providing some instructions to the system are likely to receive limited, if any, copyright protection based on the quantity and quality of human effort put in the work.

A research was embarked on in 2022 to review the domestic copyright protection of AI-induced and AI-supported creation in 48 jurisdictions. This study used a brief self-completion questionnaire to 71 respondents. These results were then grouped into two domains.

AI-Generated Outputs: Those are the works where at least the final result is produced by AI systems with no involvement of human authors. Such works, as a rule, do not belong to the sphere of subject matter protected by the copyright law since in most of the jurisdictions a human author is necessary in order to receive the copyright protection.

AI-Assisted Outputs: Such are the pieces, created using AI systems when one or multiple people employ tools facilitated by Artificial Intelligence. Further, the extent the work qualifies for a copyright protection rarely results from the mechanical or Xeroxed images or duplicated artistic works. For example, an extensive use of AI in the United States has led the U.S. Copyright Office to state that the interaction with AI may not only lack eligibility for copyright even with masses of people involved.

One important element left understudied in the work is the level of human intervention required to vest authorship in AI-authored works. Continuing the series of the decisions made by the U.S. Copyright Office, in the case of Zarya of the Dawn decided this year, one might state that even a significant degree of human control and interference still might not suffice to meet the

originality standard as a precondition for copyright protection. As the law stands on these issues, they are still under review as more changes arise on the side of the law

1.2 AI Generated Output

1.2.1 Copyright

The rise of autonomous AI systems, also known as generative AI, brings a pressing legal question: Are the artworks generated independently by AI amenable to the extant copyright legal formulations as currently provided? However, should these works receive copyright protections at all? This discussion focuses on whether human interaction beyond the commencing of the AI procedure is needed for copyright registration. The subject of copyright protection of works created by generative AI has become a topic of great concern mainly because of the first definition and the primary function of these systems as creators of works. The problem is most pressing in the legal systems of the European Union (EU) and the United States (US) that have a very distinct approach to authorship and originality.

In the European Union another directive is applying to the copyright that are for example the Directive 2001/29/EC and Directive (EU) 2019/790 is based on the human creativity. According to EU law. Currently, the EU copyright law needs a work to be expressed from the creativity of a human author. The EU courts have always been in agreement with what constitutes originality as a personal, intellectual creation that reveals the personality of the author. This standard does not grant copyrights to what solely AI produces as no author's creation is involved and there is no authorship.

Where there has been a substantial input of human labor in the use of AI tools, the resulting work may well attract copyright protection provided it is sufficiently original. More than mere command or monitoring, human input must have some element of creative input, formulating the outcome of the AI system. For the former, the moral rights are firmly grounded in the author's personality right relation to the work. Again, because of the lack of personal character in AI, the notion of moral rights are often unavailable for AI produced work. For the AI-assisted outputs, moral rights may be claimed, if the intellectual work of the human author is discerned clearly.

This isn't the only existing EU policy consideration concerning AI Works under broader intellectual property policies; the EU currently discusses the issue via its AI Act, a proposal designed to regulate numerous aspects of AI systems, including in creative industries. In the

United States Copyright protection is provided under the Copyright Act of 1976 and implemented by the U.S. Copyright Office and the courts. Key aspects include. Copyright laws of the United States CONSCIOUSLY denied protection to a work by non-human author. Recent decisions by the U.S. Copyright Office give effect to this proposition by holding that outputs generated exclusively by AI systems qualify for registration only if they incorporate a sufficient amount of human input.

In the year 2023 the Copyright Office made a decision on the case of Zarya of the Dawn under which they rejected the chance of getting copyright in elements of the comic book that were produced exclusively by AI. The decision was that even if human direction over AI reaches its absolute pinnacle it still does not qualify as originality unless what the AI has produced approximates some form of human artistic concept. When integrated into the creative process AI tools do not assume copyright ownership of the generated work if the human creator contributes his creative input significantly. For example, it can be argued that the components that are derived through the usage of AI tools may be mixed with the components that are designed personally by an author to meet the requirement of originality.

AI outputs produced autonomously are believed to fail to meet the "modicum of creativity" and human authorship to be eligible for a copyright. The US has not opted for the sui generis rights or other forms of protection for such works. Moral rights are relatively restricted in the US and meaningful only in the area of visual arts by VARA. As moral rights are correlated to human authorship, the learning creations cannot be protected by moral rights. Interestingly, while moral rights are enjoyed in AI-assisted works in any other jurisdiction aside from VARA, they are not given much recognition.

1.3 Copyright in "computer-generated works

As technology has developed more and more often we are confronted with seemingly natural data that were actually produced by computers with little to no Further human interaction. These are not materials created with computers as mere aids to the human action but are fully computer generated. Some applications include animated images for movies, software built from automated generators, crossword puzzles created form algorithms, maps of weather derived from satellites, list of share prices from real-time data, three-dimensional simulations, and synthesized music.

Currently, EU copyright claim must come from a human author's 'personal intellectual creation'. Digital or synthesized materials that are heavily engineered by a computer do not

qualify for this criterion. For instance, if there is significant human intervention in the organization, structure or in making choices of the contents of the databases or compilations, they may be protected. However, licensable outputs are usually the fully automated and the decisions in Telstra v Phone Directories for example are beyond the realm of the copyright law.

The U.S. Copyright Act of 1976 also sets out two requirements for the work to be protected they must be original and produced by a human being. Both U.S. courts and the U.S. Copyright Office have recognized the continuing role of human ingenuity as a basis of copyright protection. According to the laws of the United States of America, copyright cannot apply to computer generated productions. Those output which are predominantly created by computers as held in Telstra v Phone Directories cannot be regarded as the "original works of authorship." The rationale is consistent with the Federal Supreme Court decision in **Feist Publications, Inc. v. Rural Telephone Service Co. (1991**), United States wherein the Supreme Court laid down the proposition that it is not every work that attracts the protection of the copyright; originality is the basic requirement to obtain any copyright protection.

Like the EU, the U.S. has realized that the use of computer produced materials is increasingly becoming economically important. However, current copyright legislation has not completely embraced the current reality that content can be generated automatically. Regulators stay divided on whether other forms of protections, like sui generis rights, may be required for these materials. As it has already been pointed out the both the EU and US frameworks are based on the concept of human creativity. These traditions are upset by fully computer-generated works that have not been authored by a person. Computerized procedures are creating an expanding myriad of goods which are directly or indirectly valuable in performing economic functions. Unfortunately, these teaching and learning materials, when not authored by human beings, are not protected by copyright law, stirring controversy if other forms of protection should be sought. It points out a general necessity of having laws for the age of computer-generated content production. Both jurisdictions face the questions of how best to sustain proper incentives, encourage creators and maintain the continued application of copyrights in the light of new technologies.

1.4 Originality and Authorship As Correlates

Copyright law demand that the creative works produced therein should be original before they can be protected. This concept is associated with the concept of authorship that is inherent in both copyright systems of the European Union (EU) and of the United States (US). Nevertheless, the precise meaning of 'original' and 'author' is not clearly stated in most of the legal norms and standards hence it depends with the courts.

Within the EU, copyright subsists in "original" works; that is, those which embody goods resulting from personal intellectual creation. The Copyright in the Digital Single Market Directive (Directive (EU) 2019/790) states that originality involves human creativity here. This principle eliminates work that originated through complete automated means or processes with no input from a human. For example, courts have ruled that compilations or datasets must demonstrate human creativity in their selection or arrangement to qualify for copyright. While human authorship is required for traditional works, the EU provides alternative protections for certain non-original creations:

The sui generis Database Directive (Directive 96/9/EC) protects databases that involve substantial investment in the acquisition, verification or preparation of data, irrespective of the novelty or originality of the data itself. Other subject matter like software is regulated under special rules of distinct recognition that presupposes human input in the process of creating software.

In the US on the similar lines the Copyright Act of 1976 also provides conditions of originality and human authorship for the work. In United States practice, the USCO and the courts have held that originality does not mean that which is new or original in the sense of being invented but it must be human authorship.

The **Feist Publications, Inc**. trial was conducted in 1991 to determine the lower boundary of what constitutes copyright protection; the Supreme Court decreed it was creativity no matter how slight. A work that they produce mechanically or machine like results such as factual compilations which do not involve any creative element are not entitled for protection.

In the United States, specific provisions may allow the protection of certain nontraditional works, sound recordings or broadcast. These protections may be based on such attributes as the economic stake, or the inherent characteristic of the medium, rather than on considerations of novelty or the lack of it. For instance, sound recordings and cinematographic works receive protection so long as they involve the application of human ingenuity in their making.

1.5 Copyright for Automated Outputs

Concerns regarding the extended use of the technology in generating content make questions about access to copyright for computer generated resources questionable. In both jurisdictions.

Purely machine-produced creations for which a human doesn't participate in some phase will not qualify for copyright protection. Outputs that are aided by human creativity where there is high first-stage automation could qualify as existing types.

For this reason, authorities propose changes to copyright legislation to ensure protection of newly created automative and AI-based productions.

1.6 Rethinking Copyright for Computer-Generated Works

Another interesting case was **Telstra v Phone Directories** which proved difficulties arising out of an attempt to apply the tested principles of the copyright law to protect computer created works. The decision highlighted the problem with current copyright legislation which to a large extent anchors its thinking in traditional conventional authorship and at the same time worried many about how these principles apply in light of computers as creators of content.

Traditional authorship requirements play the next role.

The laws of the EU and the US state the work must be original and originality is generally associated with human input. Such an approach often fails to protect computer generated work for want of an author since they are not directly made by humans.

What was defined as originality is a personal intellectual creation of the author. As a result, computer generated works do not possess this criteria if they are not created with human input.

These bodies of law include the U.S. Copyright Act of 1976 and case laws that include Feist Publications Inc. rural Telephone Service CO. There is a basic principle that for work to be protected it has to be authored by humans. Some of these are documents assembled from factual information, weather maps, and even digital art that can be generated mostly or exclusively by computers and these do not have what is known as an author hence do not get copyright protection.

This move may leave economically important works out of the realms of the law but they still constitute works that have a powerful demand for technological effort and ideas.

Technology needs to be content specific or product specific and not a subject specific In this

regard therefore, I concur with the Need for Technology-Neutral Copyright.

Amending the Act to add works created with a significant degree of technology irrespective of the author. It could mean acknowledging innovation milestones or extending sui generis rights to such works.

Copyright Eligibility and Human Supervision: Subservience, Contribution, and Role Differentiation For example, if a person has a significant input in designing or even leading the creation process, the result might be properly protected. Removing works produced by a computer- generated method from copyright protection is likely to expose creators in jurisdictions with more restrictive regimes such as the EU and US to disadvantages when confronted with trading partners with more liberal approaches. For example, the recognition of copyright in general involves computer-generated works may commit stronger incentive for the innovation of AI, automated technologies.

Copyright systems have to be responsive to the nature of digital content creation so that authors create new material. It means that through transforming approaches toward laws and joining the current shift in technology policy, we can develop the required frameworks to protect creators' contributions.

1.7 Copyright Protection for AI-Generated Works

This notion comes from the copyright definition where it asks if the Impossible Foods can be copyrighted if images produced by DALL-E or texts generated by Chat-GPT can own copyright. EU and US both focus on the following as fundamental to copyright: Creativity of the human mind. However, with the advent of generative AI, the above traditional model has been tested and is still being tested.

Human Authorship is Essential

The US Constitution permits Congress to award patent monopoly to "authors" for their "writings." According to the Copyright Act 1976, copyright is an owner ship on" original works of authorship." Borrowing from the decision of courts and the US Copyright Office, the definition of "authorship" is such that it is expected that the work came from a human being. In one case, there is one case where the stock of a monkey that took photos was denied authorship under the Copyright Act. In another case, a garden that had grown rather on a natural basis was refused copyright since it was not created by man.

In Thaler v. In the recent case from the US Copyright Office (2023), a court dismissed making a

copyright on autonomous artwork created by an AI system again emphasizing the need for human authorship. Where the creator selects the AI means for the work and the AI chooses its parameters and parameters on its own, then it does not qualify as human authorship. For instance: Midjourney was used by Kris Kashtanova in the year 2022 to to create a Graphic novel. The Copyright Office later cancelled the registration for the AI generated images claiming that Midjourney was an author of them not Kashtanova. Copyright Office is aware that the structures consisting of both AI- generated and traditional authorship would be eligible for copyright however only the authors' contribution is shielded. Applicants must be sure to opt out for the parts produced by AI when applying for registration.

1.7.1 The Debate over AI as a Tool

Those in favor of ownership credit for AI-created pieces assert that such those pieces are created through the help of a tool, similar to the camera. For instance, the US Supreme Court has said that any photographers who are determining the look of the photos (i.e. deciding where to focus, how to light the picture) create work that can be subject to copyrights. Such concerns can be dismissed as irrelevant to generative AI, as the model works independently, and the user only sets a memorandum of what the model is expected to achieve. The US Copyright Office has stated that AI users are more akin to clients who provide loose instructions to an artist while involving themselves in the creative process similarly to the original clients. Some claim that the users of generative AI bring "an idea", and an AI comes up with the "expression" on its own. Ideas generate copyright but not their expression; that creates uncertainty over the proprietorship of AI outputs.

The question of how AI-generated works should be legally protected or whether they indeed should remain an open question for the US Copyright Office as well as courts at present. Of course, the Office's interpretations are persuasive, but federal courts are not constrained by them and may proceed differently in the future. It is clear for both the EU and the US that works that partly contain human and AI-generated components may have the right to receive partial copyright. However, the elements produced by the human must be pointed out, and the part with the AI help cannot be protected.

1.8 Who Owns the Copyright to Generative AI Outputs?

If some works created by generative AI are eligible for copyright protection, the question arises: who owns the copyright? Generally under the copyright law, ownership is vested in the "author or authors" of the work. However, because AI-generated works do not presently have legal standing on their side, there is no accepted practice for who the "author" of such works will be.

1.8.1 The AI User as the Author

In other regards, some people consider that the author of the AI content is the person entering the prompts that create the desired outputs. This view equates the AI to an instrument, to a camera. In this analogy. The AI user is like the photographer in those scenarios as he or she moves around making creative choices to direct the creation. AI in this form is the tool that is used to put those decisions into practice. The AI Creator as the Author

Some other people believe that the true authors of the AI system are those who develop design implement and also who feed the AI system with data. While the manufacturer of a camera designs the tool that is used to make the photos, the developers of AI get the system to make those creative choices and may be considered co-authors or contributors.

1.8.2 Do AI Outputs Infringe Copyrights in Other Works?

This is because, the AI programmed can cause violation of copyrights, for instance, depending with the outputs produced by the programmed on the copyrighted materials. Copyright infringement claims for AI-generated works often focus on two key factors: availability of the original work and considerable similarity with the original work in the AI text generated.

The plaintiff must then have to demonstrate that the highly original work actually has been copied to prove infringement. Often a possessor action will entail proving that the alleged infringer had exposure to the original work. In the context of AI. For instance, if the copyrighted work was published on line, and the AI system downloaded it, or extracted it with web scraping techniques during the learning process, this may be sufficient to prove access. Different ways exist on how US courts determines substantial similarity which includes by trying to determine whether an "ordinary reasonable person" would reasonably find that the two works are the same in their "overall look and feel." Again, literal similarity analysis also takes into account how much of a work has been taken from the original work in terms of quality and quantity against the work.

There are those who have claimed that properly designed AI systems will more often than not petition whole works or substantial parts thereof. For example, we heard from Open-AI that copying is an undesirable, often incidental, byproduct of AI procedures. But as well, there are cases where outputs of an AI mimic prior works. Getty Images filed a case against Stable Diffusion, claiming that some of its pictures were produced utilizing AI and were quite similar to or based on products and services protected by copyright.

In relation to two concepts “access” and “substantial similarity” EU copyright law stands quite close to the US one. In the event that an AI system formulated an output which is very similar to a copyrighted work within the territory of the EU, then there is a possibility that it could attract similar infringement claims as those of the US.

Liability concerning copyright issues is yet to be determined, and EU lawmakers are working on AI specific regulations under the Artificial Intelligence Act. The US primarily examines infringement on the basis of case law as to similarity of the output to the particular work and whether the AI system had access. There are precedents in the US law where both AI companies as well as the users are sued based on the shared responsibility of violation of copyright laws.

Chapter 2: Copyrightability of EU

2.1 Introduction

History and technology have particularly influenced the shaping of this copyright law. Technology is always dynamic and in its every progression it poses a threat to the effectiveness of most copyright systems. This relationship points to a cyclical one where copyright law reacts to change in technology, with the law at times ignoring the changes, then incipiently permits new forms or creative output and novel methods of sharing content. However, such regulation can also affect the formation and design of technologies on the basis of the legislation on the protection of copyrights and related rights. Thus, modern copyright law has evolved through gradual expansion of subject matter, both in terms of the categories of creative work and in terms of technological means of copying them. This expansion has been done on the basis of Technological Neutrality whereby an effort is made to ensure that the Copyright law applies in the same manner no matter the technology used in the prosecution of the act.

However the scope of copyright has grown over the years with respect to what is protected, the rights given and the duration of protection to be accorded. This expansion is explained by stressing the exclusive right of copyright and its _raison d'être_, namely, to stimulate creativity. The protection of copyrights largely has expanded, however, the constraints and exemptions for these protections have not. This issue becomes visible at its best at times in the digital era where copyright law has tended to expand rights while lagging behind regarding exceptions in the wake of digital content. This paper analyses that the European digital copyright law has emerged as a reaction to the emergent technology. The first emerged interventions was directed to the protection of computer programmed and increasing role of Internet. The Information Society Directive and DSM Directive are important regulatory achievements that relate to new technologies and their issues.

The DSM was proposed in 2015 with a clear intention to give a new impulse to copyright modernization. These changes – such as the Directive on Copyright in the Digital Single Market- are intended to achieve a better ratio between rights owners, consumers and digital platforms.

2.1.1 Incompatibility with the Digital Ecosystem

Several fundamental concepts of copyright do not fit well today's world of Internet and computers. Some of the concepts that well fit the analogue world are difficult to implement in the new environment as the content can be easily copied and disseminated. Fair use and other exclusions do not cover new media consumption and sharing based on the new form of content use. Products such as user-generated content sites and sharing services have created questions about the distributing and use of it fairly.

One reason why flexible exceptions have not emerged is that it stumped the emergence of tools and technologies that depend on creative repurposing of content. Copyright legislation as it currently stands cannot help but fall short of this if it is to continue in its important function, which is why copyright laws have to adapt to the digital world. Adding more contexts to the exceptions to help creativity, learning, and individual sharing. Assisting in guaranteeing that the laws of copyright do not continue deceiving the societies by denying them full access to essential and values' information products.

Undoubtedly, the development of digital copyright law requires the consideration of interests of rights holders and, at the same time, users and digital technology companies. Examining the vicarious liability of the platforms and intermediaries for inducement of copyright infringements in promoting positive technologies to empower the lawful sharing and utilization of copyrighted products.

2.2 The Historical Roots and Evolution of European Copyright Law: A Legacy of Complexity

European copyright law is based on early legal influences and fundamental principles that influenced its current regime. These basic elements originating from the civil law systems [authors' rights and the protection of neighboring rights, and based on the Anglo-Saxon copyright traditions), have been included in the European Union's copyright system through harmonization. Other treaties that have affected the growth of EU copyright laws include the Berne Convention, TRIPS as well as the two WIPO Copyright Treaties. EU copyright regulation today was built on the historical principles of European copyright law. The above principles have thus proved versatile over the centuries because they are capable of accommodating change in technology that has come in handy in extending the subject matters of copyright to other forms of creation and means of distribution.

The legacy of this has been good for development and yet it has a downside. Such approaches'

reliance on traditional concepts and mechanisms threatens to entrench copyright law in stale ways and thinking. For this to happen, it can be difficult to adapt to the unique demands of the new millennium and the very dynamic nature of new media content and technologies that constantly defy existing laws.

Consequently, European copyright law has the advantage of a long history of adaptation On the other hand, history has again created both strength and weakness. In the course of over three hundred years, the protection accorded by copy-right law has been adjusted to meet such new concepts as printing presses, photography, picture production, and now electronic technologies. This adaptability allays the internal dynamism that characterizes the European copyright traditions. But, on the same side the legacy works as a 'freezing influence'. What copyright law should abandon is the previous methods and concepts so that it can be able to fully gain from the opportunities and challenges of the new technologies resulting from digital environment.

2.3 The Concept of "Work" in European Copyright Law: Open and Technologically Neutral

The idea as an object of copyright protection is based on the notion of 'work' which has been crucial in shaping the law as a responsive one for centuries. Due to this factor flexibility of the law enables it to cover new types of creation thus catering for new inventions due to advancement in technology. That is, originality and the idea/expression division present courts the flexibility to determine what constitutes 'work' on a case by case basis.

As applied to new forms of creative work, the example of copy left extension to areas such as to the Covered Work is quite striking as it is observable that such an extension was not without a redeployment of copyright basic principles for consideration such as originality and the shifting idea/expression divide as set by the Computer Programmed Directive. Because raw data or information fell outside the ambit of copyright legislation due to the rules against copyright in computer programmed and other kinds of databases, the formation of a sui generis right for databases was made possible.

Even though video games, individual web sites, and multimedia products, which involve various types of technology-provided interactivity, have been accorded copyright protection, following an ability of the law to recognize new forms of creativity. Concept of work has evolved to accommodate newfangled art forms like photography, films, and any form of creative have contents. Academic freedom consists in the freedom professionally practiced in the frameworks of creative activities; the freedom to use new forms of representation is aimed

at strengthening legal guarantees.

Theory One bears the potential of generating excessive sprawl of the concept of copyright which could trap subject matter for which various other forms of intellectual property possession are more appropriate. This means that, as copyright law develops, they encompass new works, they may overlap with other forms of legal functioning, therefore causing a conflict.

The unprotected subject in European copyright law is a concept of a 'work' which is inherently flexible to encompass new developments in technology and in creative endeavor. However, careful balancing is required to prevent over-expansion and ensure that copyright law remains focused on its core purpose: Pandects v is, for preserving the rights of authors and artists as creators on one hand and on the other, promoting innovation. It is only a matter of time before the openness of the "work" concept will be challenged as technology progresses and the "work" concept continues to be refined and tweaked to keep copyright from engulfing areas that is better handled by other laws.

2.4 The Restrictive Approach to Copyright Exceptions and Limitations in EU Law

EU copyright law is to the extent of promoting an elongated and limited form of related exceptions and limitations. This approach could be traced back to the historical doctrines of the continental copyright system especially the author's rights systems which tend to be biased in favor of authors. In this context, exclusion as a violation is viewed as a limited break from the author's monopoly rather than formally equalizing an exception. The use of the catalogue of categories of works as a list from which exceptions can be granted is traditional for the continental copyright system. This is however flexible than the fair use doctrine that exists in the United States of America. In the EU, exceptions have be tightly categorized to meet the requirements in laws such the Information Society Directive (2001/29/EC).

There is an objective of achieving the coordination of copyright laws regulating the list of countries in EU Members. While an open system, such as fair use, means that the same laws may not be applied in the same way in different jurisdictions. To date this restrictive approach has been supported by the Court of Justice of the European Union (CJEU), thus stating that the exceptions must be construed restrictively and that they cannot include scenarios not provided under EU law.

The Information Society Directive permits applications of technology like for the overriding of exceptions. If TPMs prevent copying of digital content, then technical measures prevent the ability of the user to make private copy in accordance with the private copy exception. The same applies to electronic databases, and certain programmed where simultaneous copying is either not allowed or allowed only to a limited extent.

The efforts to increase the allowance of exceptions to a right such as freedom of expression have been declined. According to the CJEU, any exceptions need to be based on the list in Article 5 of the Information Society Directive, even if freedom of Newspapers is invoked. The restrictive framework does not mesh well with ever-changing societal requirements of people in the World Wide Web era such as remixing, fair dealing for educational purposes, sharing of content, among others. It must be noted that even where such exemptions as under Directive 2019/790 for text and data mining are mandatory, they remain circumscribed by technological constraints, making it almost impossible in practice.

Due to the stiff approach, the status of users in the digital environment diminishes which puts a pressure on individuals and organizations which seek to rely on the exceptions of copyright laws.

Exceptions are also subject to contracts that relate to use of digital content. This is the case because, as the research has shown, many users have limited legal redress when TPMs prevent lawful uses.

The restrictive regime is built upon the protection of authors, but freedom may overturn the rest of society's concerns. Hence, exceptions are useful to support education, innovation, and access to information, but it does not look like it at the moment.

The EU desperately needs to adopt fair use exceptions to creative rights to make certain that its present position is not so dogmatic as to damage the inventive economy. Such credit would enable the courts to accommodate competing societal interests in a situation where they are required to make the necessary adjustments given emergent technological developments.

Such obligatory differences including those provided by Directive as Directive 2019/790 should be effectively implemented and cannot be cancelled by contracts or particular technologies. Enhanced legal safeguards remain required to provide legal backing for the safeguarded exceptions users especially in learning, research and non-business purposes. To respond to these challenges the modern copyright system should balance the interests of right holders and users living in the digital age. This has involved updating exceptions to accommodate new types of content production, distribution and use.

2.5 The Digital Revolution and Challenges to Copyright Law: Fixation and Closed Categories

Technological advancement has refined itself over the decades, leading to massive emergence of new media technologies, a fact that has made copyright difficult to assert. It can be seen that, although some principles have translated into this new paradigm, others such as fixation and categories of closed protected work seem clichéd and incongruent with today's dynamic digital environment. Such problems demonstrate the problematic relationship between standard copyright provisions and digital culture. It has to do with the condition that a work must be put down in writing or can be readily reproduced on some physical medium to be protected by a copyright. It stems from older, copyright-analogue conventions, and continues to be one of the defining elements in most jurisdictions, including those of the Berne Convention.

Interactive Works in cases such as video games that are constantly 'modifying' the content fixation has remained a topic of discussion. Courts have generally agreed that and the original code of the game works as a fixed form notwithstanding screen display changes. Wherein further patterns can hardly be identified, fixation for highly engaging digital works complicates the application of copyright.

Some speculate that fixation no longer relates to digital environments to safeguard the interest of copyright holders. Some scholars opine that with the changing technologically driven world, fixation does not serve the purpose as it used to. With regard to fixation, in the recent Leola Hengelo case CJEU did touch it indirectly and said that for being protected under copyright an object must be 'individual, precise and conceivable in an objective manner as a work'. Critics claim that this interpretation rather leans toward fixation in order to note that fixation gives entirely an outmoded view of copyright.

For items which contain multiple measures such as video, sound, and interactivity, a classification into individual categories often does not make sense at all. This can leave parts of the work uncovered, or force the attribution of a work based on mere snap decisions rather than clear categorization. Such typifications as website designs, the interfaces of smartphones or games and resolves, creative duo, or PC created scenarios pose problems for closed categories as such creations would rarely fit definitions of conventional closed categories.

However, the CJEU has made efforts in expanding the subject matter of copyright protection. For example, in Nintendo & co v PC Box the Court considered video games, including their hardware and audiovisual parts, as single works protected by copyright Accordingly in **Bezpečnostní softwarová asociace** CJEU preserved the practical meaning for graphic user

interfaces showing the trend toward the more comprehensive recognition of such works.

Here, the EU has not finalized the alignment of fundamental concepts such as fixation and the perimeter of protected work. : Some of the decisions made by the CJEU seem to point towards more flexibility while others bring out the fact that where the foundational questions are concerned judicial interpretation alone cannot find the answers.

Perhaps an EU-wide reform could formulate these issues and could lead to a scenario, which has already been mentioned, that could omit a strict fixation rule in the EU. Providing a new framework for solving the problem connected with the definition of works which embraces new forms of digital technology while predesigning legal security. As with many potential changes in copyright, any solutions must satisfy both the need for ingenuity and the need for simplicity. As with all technologies, product and system adaptability is pivotal in defining and addressing future technological advances, however flexibility cannot be executed ambiguously or beyond the defined objectives.

2.6 The Hybrid Nature of Computer Programs

The distinction between the idea and expression in relation to copyright law has become blurred in the year 2000 especially in advanced computer programmed. One of the main conflicts arising from applying the widely acknowledged concept where a copyright protects the manifestation of a concept but does not safeguard the concept itself in the context of software is that the subject matter comprises both functional components (such as algorithms) and expressions. A software programed comprises of symbolic component (which is for instance the code entered by the programmer) as well as the functional component (how the programme performs when it is run).

The challenge arises when one gets to balances protecting the bare code from being protected in addition to the functional aspects such as algorithms or processes. According to the EU Software Directive (2009/24/EC), it is only the “expression” of the computer programed and ideas, the principles, and the functionalities are not protected. For instance, it is common: logic, algorithms, and programming languages, to be considerate “ideas.”

Security Software Association thus the CJUE ruled that GUI’s are not another form of expression of a computer programed according to the Software Directive.

However, the Court distinguished between GUIs claiming The GUI Configuration categories, those might qualify for Copyrights if they were to meet the required standard of originality. The

lessons learnt hence are that GUIs are not protectable if their design is determined solely on functionality because it shrinks the realm of possibility for creativeness and makes it difficult to distinguish the idea from the work. The US merger doctrine, according to which there is no protection if the idea and the shape of its implementation are identical, receives implicit recognition in the EU. For example, GUIs are not shielded if one of the element bases is determined by the function and not the design.

2.7 Copyright Exceptions and Limitations in the Digital Era: Balancing Idealism and Realism

Extensions of copyright and licensing have attracted much controversy with regard to technological changes and the use of exceptions and limitations. In the digital world it therefore becomes difficult to address new forms of creativity and modes of content dissemination by retaining a closed list of exceptions such as in the current EU copyright laws. Some cognition stones complained that this is not consistent with the calls for technological neutrality of copyright norms. A closed and fixed list of exceptions becomes a problem when new technologies and practices evolve rapidly. This has stirred many people to look for more flexibility in order to enable this law to grow in relation to technological advances. Some of the ideas in this respect include. Whenever possible, copyright must be balanced with constitutional fundamentals like freedom of speech and privacy and When the existing categories for exceptions cannot address situations that were not foreseen, Using interpretations of similarity or by implication or incorporating new situations into existing categories for Looking at the fair use model which is similar to the US where courts have more discretion.

Some of the factors which hinder copyright exceptions are DRM, and restrictive contracts further exacerbate the problem. For example, a user may be legally allowed to copy a work under, say, fair use but the DRM or terms of use deny you access or usage thus defeating the purpose of the exception.EU law has come up with legal consumer, for instance, the Computer programmed Lawful consumers are permitted to undertake certain activities such as copying of programmed. The need for technologically neutral copyright norms. A closed list of exceptions struggles to keep up with emerging technologies and user practices. This rigidity has led to calls for greater flexibility to allow copyright law to evolve alongside technological developments. Ideas to achieve this include. The Balancing copyright with fundamental rights such as freedom of expression and privacy and Introducing interpretations by analogy or implied consent to extend exceptions to unanticipated scenarios for Exploring the adoption of a fair use model, similar to the US system, which provides courts with broader discretion.

Digital Rights Management (DRM) and restrictive contracts often undermine the application of copyright exceptions. For example, a user might be legally entitled to copy a work under an exception, but DRM or contract terms can prevent access or usage, effectively nullifying the exception.EU law has introduced concepts like lawful users, whose rights are protected in specific contexts, such as the Computer programs Lawful users are granted limited rights, such as making backup copies. Databases, Users may make use of some content in a database in particular cases with special references. These exceptions cannot be overridden by contracts – such a change to the approach reflects the shift in focus to user rights.

Scholars have come across CJEU that has assumed a portion of the copyright exceptions as the users' rights rather than statutory entitlements. This approach obliges courts to take consideration of freedoms of authors as well as users within the context of recognition of necessary freedoms such as freedom of expression as it is articulated by the Article 11 of the EU Charter of Fundamental Rights. For example, the CJEU has ruled that copyright exceptions must be interpreted flexibly to protect users' rights, shifting away from a traditionally restrictive interpretation. The three-step test, incorporated into the Information Society Directive, requires that exceptions:

1. Be applied to specific cases.
2. No they do not challenge the ordinary exploitation of the work.
3. Not unreasonably prejudice the author's legitimate interest.

In practice, this test has been utilized to restrict exceptions even more, with issues becoming challenging for a court to unlock user rights. Even though user rights have been accepted, the question of how their rights can be defended or asserted has not been answered. It may be necessary for consumers to be protected by the legislator from the possibility of DRM, or restrictive contractual terms excluding their rights. National courts are now invited to take account of the fundamental rights when applying copyright exceptions. This can be done at the expense of freedom of expression or access to information as against the right of authors to control use of their works in some circumstances.

2.8 The EU Concept of Work and AI-Generated Outputs

AI brings a new problem to the copyright legislation that was initially based on the authorship of work. As mentioned before, technology has been traditionally seen as an implement that the human kind utilizes to develop, protect and disseminate copyrighted contents. However, conversational AI systems that can produce complex and unpredictable output present a new type of paradigm which appears to challenge the idea of authorship entirely. In the past, creators employing technology had to programed, or at least dictate, rules into the computational system.

Current forms of AI especially the neural network and deep learning, work by processing big data to produce outputs independently. The human controls are minimal, performed at the beginning of the process, while the output is frequently unpredictable or difficult to rationalize.

According to EU copyright law and as understood by CJEU, the work has to satisfy two conditions to be protected, One, the work must be original. The idea has to be communicated in a physical manner. It is important for the output which is generated by artificial intelligence to be classified as such only if the human author can show that original decision-making was exercised in the course of deriving at the final piece. Developers of the programmers involved in creating the AI might not have a direct and personal role in what comes out of the applications they develop, as their assignment only consists of developing the software, not the exhibits. While users can provide instructions or training data, they can modify the output through direct instructional control or even their training data input, they rarely understand the process by which the AI creates the final work.

The nature of AI-generated outputs is that they synthesize elements from programming, the inputs from the user, and the algorithm's output, which makes it challenging to pinpoint where the author of a given output is. At other times, the programmer, for instance, can hardly justify a substantial contribution to the creativity of the software or the user. In legal terms, if there is no person who can claim authorship of the output, such outputs are free for public use. Some of the delivered by AI outputs could be afforded legal protection within the existing entrepreneurial rights, such as those attributed to the producers of phonograms, films or press publications.

A new copyright regime that does not necessarily involve human input could be created and put into practice for parallel with the UK Copyright, Designs, and Patents Act of computer-generated work. They suggested that a new system completely, based on the database right, could offer special protection for the AI outputs without applying usual copyright theories. AI

experts claim that the distinction between the role of the author of an AI, the functions of a human user, and the work of an artificial intelligence are often quite challenging to discern. Therefore, identification of the source of originality becomes very challenging.

The EU needs to determine whether outputs produced by AI will be incorporated unto the existing copyright law of the EU or if the latter will need a new law over it. It follows that any new system introduced should take time to determine the incentives to provide for innovation together with the best way to make sure that creative material is made available to the greater society at large. The establishment of sui generis rights or a new specialized copyright system could be more helpful in covering the existing shortcomings without overloading the traditional copyright principles. These systems should also capture the essence of AI creativity, especially that the rules regarding ownership and usage should not be ambiguous.

2.9 Copyright Territoriality and Geo-blocking: A Conflict in EU Digital Copyright Law

The business complexity resulting from the principle of copyright territoriality is a major challenge in the age of technology. It goes against the grain of the internet and the World Wide Web which is characterized by freedom, boundaries less online communities. This principle derived from Article 5(2) of the Berne Convention empowers countries to exercise their national laws on copyright domestically resulting to market fragmentation within the EU. Copyright territoriality is a principle that permits protection of copyright works to be exercised differently in different geographical jurisdictions. Licensees may negotiate creative rights in some territories that allows right holders to exercise territorial exclusivity over the exploitation of works.

According to the case law of the Court of Justice of the European Union (CJEU), territorial licensing is legal. Similarly, in **Coditel II** case, the court upheld the law of territorial licensing in industries so that the market is divided according to geographical areas. It makes it possible for Member States to adapt the law of copyright to local conditions. It approves differentiated licenses that are favorable in enhancing the flow of revenues to the right holders.

Geoblocking is an approach that Copy right protection takes by limiting access to content based with the location of a user. It practices territorial licensing, that is restricts access of content beyond the permitted geographical area. Thus, geoblocking is grouped under the traditional copyright law as a means of strengthening the fragmentation by territoriality. It on the other hand hinders the achievement of the EU's common digital market, whereby consumers from

different member countries unite to make a single large market. Territorial licensing takes EU and fragments it into national markets, which hider freedom of movement of goods and services. The mentioned fragmentation is especially critical for digital platforms that expect the convenience of accessing content across borders.

The Internet functions according to a global standard, which does not constitute territorial particularity but general openness. Territoriality undermines the formation of a single approach towards copyright in the EU and distorts the ease and cost of accessing digital products. It is therefore important to note that although the principle of territoriality had its historical and economic basis, it is high time for the principle to grow up to the contemporary conditions. There might exist the possibility to minimize market fragmentation and at the same time develop a more incorporated approach towards copyright law that will consider right holders' concerns. The EU could drift towards universal standards that mean diversity but at the same time guarantee equal access to digital content. This might have included increasing EU convergence and over time the dismantling of territorial barriers.

2.10 The Future of Digital European Copyright Law

The development of the European digital copyright has been informed mainly by technological factors. The EU has endeavored to have a single acquis in the area of copyright law with a view to addressing effects of the new digital environment but there are still challenges. In respect of the three guiding principles of legal certainty, technological neutrality and respect for fundamental rights, there exist questions pertaining to the future direction of EU Digital Copyright law. The process of harmonization of copyright law of the EU has originated with the Directive on the Legal Protection of Computer Programmed which can be regarded as rather anomalous to copyright law. For instance, it preserved computer programmes and database rights that include sui generis rights, and defined lawful use. The introduction of these principles was intended to exert certain control over the new markets for information goods in Europe.

The EU defined originality as "the author's own intellectual creation," that was first used for low creativity works such as computer programmed and databases and then expanded with reference to all forms of work. Of particular relevance was the principle of exhaustion, which was used in the Used Soft case to rule legal the resale of software licenses downloaded online. Directive 2019/790, known as the Copyright Directive in the Digital Single Market, raised direct liability for platforms that host the content protected by the copyright, which shows a certain change in this direction.

EU copyright law has to be necessarily harmonized so that it encompasses the protection of right holders on the one hand as well as the fundamental rights such as freedom of expression and information on the other hand. The Directive 2019/790 and case law from the Court of Justice of the European Union (CJEU) established this balance. Primacy of national law as it relates to copyrights goes against internet itself, which does not recognize the division of the EU market into national jurisdictions at its base. Territorialization and geoblocking affect the formation of the unified digital space of goods and services, therefore, considering solutions that can establish free cross-border access and use of content.

The proposal of the United European Copyright Code has been discussed in the academia and the legal practitioner community. Blueprints such as the **Wittem Code**, a model European Copyright Code exist as an effort in codification. However, full harmonization has its difficulties in front of it Copyright law is generally considered to be rigid and unfair and, in consequence, the public is rather skeptical about it. The differences between the Anglo-Saxon copyright model and the continental "droit d'auteur" (author's rights) tradition are at the center of this debate. As the UK quits the EU, it erases one major common law influence to create greater standardization or perhaps the move to a continental approach. However, gaps between Member States are still quite large.

Another approach is a possibility of including copyright law into an overall European Charter of Intellectual Property as containing norms concerning all types of IP (such as patents, trademarks, etc.). Actual examples of the integration with national systems, such as the French Intellectual Property Code, are also provided to illustrate the described approaches. Some of the problems include great difficulties of integrating such a broad number of various forms of protection of information. The possibility of eradicating the idea of copyright law as an independent legal concept and moving towards the establishment of a more general idea.

More changes required in the future of copyright law does not become the hostage of the existing technological capabilities and remain prior to technological neutrality. Harmonization of the complexity of the legal prescriptions related to copyright in the different Member States would mean a general decrease of legal risks and an enhanced promotion of innovativeness. This needs to be met through harmonizing ways of handling various matters such as moral rights, authorship and copyrights contracts. Any major reforms require political capital and procedural transparency and public engagement create legitimacy for both. Lack of people's support can derail noble initiatives such as the European Copyright Code.

2.11 The Law and Technology Approach: European Copyright Law as Part of a European Code of Information or Internet Law

Recently the option to place EU copyright law into a broader Information or Internet law has been getting attention. : This approach implies the concentration of all legal rules linked to computer sciences and the information society, guaranteeing a homogeneous framework that would allow for a proper answer to the problems of the new digital age. For the past twenty years the EU adopted a vast number of regulations including data protection regulation, consumer protection regulation and others such as the intermediary liability regulation. Several of these rules resemble copyright law. An integrated legal regime can be achieved if the EU adopts an EU Information Law or an EU Internet Law to address the digital issues exhaustively.

1. E-Commerce Directive: Performs the foundation for the liabilities of the intermediaries.
2. Digital Services Act: Called for new set of rules for online social networks and services.

The work I proposed related to free speech and privacy rights mechanisms may contribute to a less protectionist and more proportional interpretation of copyright norms. Perhaps we are getting to a time where customized solutions for digital problems could present copyright with consumer and competition laws. Appropriate to the demand in the new economy, regulatory limits on information goods, therefore, should not be as stringent; and especially the copyright should allow publication of new low-creativity works. This might include: narrowing the list of subject that could be protected; enhancing the requirement that could be labelled as compulsory licenses to copyright.

Software compatibility is an important and emerging issue on interconnected digital systems, especially in digital software and services. Laws existing today like the Computer Programmed Directive have not adequately tackled this problem. Another approach could position interoperability within the overlap of competition and consumer law – coordinating the compatibility of related systems while encouraging innovation. Scholars continue to use the terms information law, internet law, and technology law as if these terms are exclusive and sharply defined. It uses these terms based on different meanings and it is not easy to distinguish between them. However, these broader fields are somewhat newer than copyright law and may therefore still be developing at perhaps the most difficult to define.

Diversifying the areas of the legal profession and grouping them in particular sets would be a tremendous undertaking. It is important to understand that each of them can have its own adhesion to principles, aims and regulations. For instance, combining concepts of copyright with the GDPR would mean balancing out rights in areas such as private rights to privacy, to

access content that is protected under copyright. An integrated legal approach may result in the rules becoming excessively complicated for firms and citizens to understand. It is possible to be overregulated as well as possible to be under regulated, and the middle ground is often the best ground.

The concept of a European Code of Information Technology may embody post-copyright condition. This kind of framework would capture more vividly the attributes of a paradigm in which conventional copyright precepts are anemic.

Chapter 3: Copyrightability of US

3.1 Introduction

Copyright law encompasses a specific set User's exclusive right with the regards to the original work of Authorship in any tangible medium of Expression. Copyright law will make sure that the creators of such works have the sovereignty to decide how people should use their work in the society while at the same time encouraging inventiveness as well as imaginative creation.

U.S. copyright law recognizes the following as eligible for protection:

1. Literary Works: Newspapers, magazines, and all written material.
2. Musical Works: Lyrics and tunes, that is, songs with words and music.
3. Dramatic Works: Scripts for musicals, and plays with or without music accompaniment.
4. Artistic Works: Graphics and fine arts, prints and paintings, sculptures and affairs, and photographic creations.
5. Audiovisual Works: Moving pictures, programmed sequences, programmed and other productions which use images and sounds.
6. Sound Recordings: Recorded recitals and recorded lectures or speeches. 7. Architectural Works: The architectural layouts or the blue prints and real life structures of the buildings.

To be protect by copyright a work has to be original from the author and possess a low level of originality. It must exist on a medium: paper, digital file that the hearer/reader can perceive, reproduce or communicate. The term may refer to an anthology of other people's work which is arranged in a new manner in that it has the potential of being copyrighted. A copy of one or more preexisting work in which new material has been introduced, for example, translations, adaptations, etc.

It may be passed on by contractual agreements or licenses. Employers may own the copyright

for “works made for hire.” Derived from the above discussion, when copyright has elapsed, works thus become ‘orphaned’ and can be utilized as and when wished for. Also, works which do not come under copyright criteria, like the federal documents, are free from copyrights. Legal benefits that are enjoyed by those who register with the U.S. Copyright Office include the right to sue for statutory damages.

The Digital Millennium Copyright Act was passed with the changes in technology where the usual problems such as online piracy emerge. It provides provisions related to Digital Rights Management protection systems and safeguard for internet platforms in case they remove content swiftly. The philosophy of American copyright legislation is to protect authors and their work, businesses and the public at the same time giving adequate consideration to the needs and wants of the people. It meets new technology demands and disciplinary cultures guaranteeing ongoing inspiration and creativity.

3.2 Simplified Explanation of Restored Copyright and U.S. Government Works

U.S copyright law provides for reinstatement of copyright to work previously in the public domain under certain circumstances and deals with the subject of federal government works. Here are some of these rules in a nutshell These rules pertain to Restored Copyright that protects works originally published in eligible foreign jurisdictions which had entered the US public domain because of certain reasons such as noncompliance with formalities. This restoration is fully in compliance with Section 104A of the United States Copyright Act.

Copyright is thereafter revived on the date it is restored or the date of restoration and the term is the remaining part of the period as would have been accorded under the United States law if the work was never placed in the public domain. A restored work needs to come from an eligible country, and have at least one author or rights holder from the eligible country, as well as follow additional requirements which include but not limited to; it cannot be in the public domain in its country of origin. The regained copyright, in the first instance, vests in the author or the rights owner in accord with the laws of the country of origin.

Commencement of an action for infringement of rights under section 504 requires a rights holder to submit an NIE to the US Copyright Office or to serve it upon certain folks (reliance parties) to enforce rights against parties using the work when it was in the public domain. Reliance parties are those who utilized the work lawfully before the restoration process was initiated. They may use some subsequent derivative work products as they wish but in a

reasonable ways that they have to pay something to the owner of the copyright. Secondary works, made from a work which was in the public domain prior to its owner getting a copyright, are being used provided that compensations have been made to the owner of the copyright. The President can also bring back the copyright protection in foreign works that protect US works in like manner.

When talking about copyright some exceptions have to be mentioned this work being a work for hire created by an employee within his scope of employment for the United States is not subject to legal protection under Section 105 of the Copyright Act. But there are specific rules that apply to some works and certain exclusion. Work that has been produced by employees of the federal government in their capacity as such, cannot be copyrighted. This is in order to make such works available to the public. While the government cannot own the copyrights in works under their creation, such as the Official Gazette, it can maintain copyrights in works assigned to it, by operation of the law or otherwise. At military and intelligence academies (Military Academy, National Intelligence University, etc.) civilian faculty have copyrights to works or scholarly pursuits. However the government may need to obtain a nonexclusive license to use these works for governmental purposes.

Returned copyrights reclaim certain conducts' protection for foreign works but at the same earns back authors' original rights for fair users who previously benefited from republishing. For USG works, the principle of public access continues to hold maximum importance, though there are exceptions granted for certain research papers prepared by civilian academics. Both of these provisions are meant to show that the law has the underlying purport to foster creativity, but its end at the same time ensures reasonable control.

3.2.1 Explanation of Exclusive Rights and Limitations on Copyright (US)

According to the United States copyright law, the copyright's owner enjoys certain responsibilities that are exclusive. These rights enable them to set the terms on which their work may and these are be utilized.

1. The mimic replication in duplicate or records.
2. Today you can not only listen to records, but create ones, as well as make other adaptations from records, which are derivative works.
3. Make the work available for use by sale, transfer of ownership, rental, and lease or lending.
4. Make the work available to the public by performance for non-commercial purposes for literary, musical, dramatic and choreographic works and audiovisual works. 5. Finally, post the

work — be it photographs, illustrations, or pictorials. 6. Record sound aloud by means of digital audio broadcasts.

These rights can be sold or assigned and any unauthorized use of the copyrighted material is a violation of the U.S Copyright Act § 106

The United States also recognizes other rights to creators of visual art through the Visual Artists Rights Act (VARA). These rights are stated as follows: The Authors may request or deny their identity as authors if the content is changed in a way that is detrimental to the Authors. If an author's work is well known they are able to protect it from being intentionally harmed, altered or destroyed by others. Such free use allows limited use of copyrighted work without the authorization of the owner of the copyright. It applies to activities such as criticism, teaching and research and news dissemination.

Every nation that is a signatory to international agreements concerning copyrights recognizes the first sale doctrine which permits the lawful owner of an original to sell or dispose it without the permission of the copyright owner. There are some exemptions that include; selling software or music recordings for purpose of making a profit is prohibited (§ 109)However, nonprofit educational institution s And religious organizations can perform or display the work without permission in settings like classroom or worship (§ 110). These uses have to be related to the teaching function or the purpose of the event (§ 110).Cable and satellite providers may redistribute broadcast content under statutory licenses. Concerning § 111 provisions, rules on how and when fees are paid to copyright owners and how content can be changed during retransmission.

These rules minimize protection of creators' rights while permitting certain service contemplating uses for the public's benefit. In the United States, fair use, educational exemptions, and statutory licenses serve as guidance to how these systems should work to guarantee that the arts can enhance precaution and learning devoid of trampling upon the rights of authors..

3.3 Exclusive Rights in Pictorial, Graphic, and Sculptural Works Reproduction of Copyrighted Works

The owner of the copyright in a pictorial, graphic, or sculptural work, has the exclusive right to reproduce it in any such form upon any article of manufacture or any product produced by the hand of the author in his or her useful arts (17 U.S.C. §113(a)).The modifications do not preserve greater or lesser rights concerning the reproduction, distribution or display of such useful articles than are accord

If removal of the art from the building would harm, change or destroy it and the artist agreed to put it up, the artist's rights under the Visual Artists Rights Act (VARA) may not be enforced (17 U.S.C. §113(d)(1)). If the art can be removed without causing damage, the artist retains rights unless the building owner attempted to inform the artist or the artist did not take the appropriate action after being notified (17 U.S.C. § 113(d)(2)). The Copyright Office keeps records in order to determine the identity of artists and their works in buildings and to change their contact details, as well as to register activity by building owners regarding compliance with the law (17. U.S.C. § 113 (d)(3)).

The rights of a sound recording's copyright holder include:

1. Duplication of recording or any other material which is made form the recording such as CDs or even digital files.
2. GENERICALLY Entailing the preparation of secondary products derived by changing, combining or adapting the recording.
3. Whereby copies of this are issued out.
4. The public performance of the recording included the digital audio transmission.

These rights do not entitle making a subsequent copy of the recording by separately producing similar tones, even though they may reproduce the sound (17 U.S.C. §114(b)).

Sound recording rights do not grant a general right of public performance of the work unless through digital audio transmission (17 U.S.C. § 114(a)). Retransmissions which are no subscription broadcasts or specific retransmissions are exempted by the law (17 U.S.C. §114(d)(1)). Some sound Recordings performances by means of a digital audio transmission are eligible for statutory licensing so that the affected copyright owners are paid fairly while making the works available. Terms of such licenses are negotiated according to various factors including the type of service, and its capacity to displace or encourage the sales of physical copies (17 U.S.C.§114(f)).

Royalties from statutory licenses are distributed as follows:

1. 50% to copyright owners.
2. To featured recording artists, 45%.
3. Five percent to be distributed to musicians and vocalists not featured in the music video or audio; (17 U.S.C. §114(g)).

Some kinds of services – satellite radio or subscription audio services which were in operation before certain dates – are treated differently. Copyright owners are allowed to conclude voluntary agreements with services in which the terms of statutory licenses can be deviated (17 U.S.C.§114(f)).

3.4 Rights for Computer Programs

One can make another copy or adapt a computer programed which has been lawfully made without violating the provisions of the law The new copy or the adaptation is required for the programed to operate in the machine; it is not utilized in any other way. The new copy or the adaptation is made for archival use only and all such copies if the owner no longer lawfully owns the programed shall be erased The copies and adaptations made under these circumstances may only be transferred They can be sold, leased or otherwise transferred together with the original programed copy The transfer of the adaptation is allowed only if the copyright owner permits such transfer. The provisions under 17 U.S.C. § 117 are especially applicable to the contemporary intensive use of software in daily mechanical equipment, IoT units, and cloud facilities. These provisions can allow a user to as avails himself of these others features remain functional without having to infringe on copyrights. But as one advanced technology replaces the other (for instance, software engineered in self-driving automobiles), the scale where user rights prevail over and adaptation to copyright remains a contentious issue.

Use of copyrighted materials In ways defined by statutory licenses, public broadcasting entities which include noncommercial educational stations can use certain works. Depending on licensing rules and regulations, it covers nondramatic musicals, as well as pictorial, graphic or sculptural works. The piracy organizations and copyright owners together with public broadcasters must agree on the terms and rates. They are with the Copyright Royalty Judges and pre empty statutory licensing terms. In the case, where there are no voluntary agreements, rates received by copyright owners are determined by the Copyright Royalty Judges for the term of 5 years giving regard to other alike voluntary agreements and adequate remuneration For public broadcasters they serve as an important part of education those people who cannot afford to pay for their own cabling and as spreading cultural values. New forms of broadcasting include

digital broadcasting and streaming, therefore; new methods of what constitutes fair use to give access to programmed to the public, and fair compensation for the rights holders need to be developed. (17 U.S.C. § 118)

3.5 Ownership and Transfer of Copyright

If the work has been made for hire say for hire a example an employee for the employer or under certain types of contracts the employer or the person for who the work was done is deemed the author. This means that unless the contract between the two parties provides otherwise, the employer or commissioning party own all copyright rights.

C) The author of a work acquires the copyright in the work as soon as the work is produced. Those created by two or more authors are jointly owned by the copyright owner, any part all authors have equal rights until further agreement.

In other words, in case the particular contribution is in the form of articles to a collective work such as an anthology or a magazine, the copyright of this contribution vests in the contributor of the particular contribution unless conveyed by the contributor of the particular contribution. The copyright owner contributor of a collective work is believed to have rights only with regard to the contribution in a particular collective work or in an updated or a series thereof.

Assignment of ownership of copyright can occur in its entirety or in part through transfer by the written instrument or by any other legal means; such as through on inheritance. Examples of what can be transferred include some rights such as reproduction or distribution, or all the rights. The subsequent owner of a transferred right has the same defenses as the owner of the copyright.

Regardless of whether an individual author has not assigned his/her copyright, no person or government can take the copyright or assign it; save in conditions such as Bankruptcy proceeding (as outlined under Title 11 of the United States code).

Possession of a tangible good like book or a painting is no way gives its ownership the copyright over it. As with the earlier discussed distribution rights, owning the copyright to a work also does not make one the owner of the physical object in which the work is fixed unless agreed otherwise. (17 U.S.C. § 202)

When it is over, the license reverts back to the author or their beneficiaries, but pre-termination derived works can continue being utilized under the initial… Subsequent transfers of rights to the same work can be carried out only after termination and all those with termination interests.

COPYRIGHT LAW particularly has some tremendous challenges when considering this in the light of current advanced technology whereby people can copy works very easily and share the same on the internet. As we have seen automated rights transfers, contents located in the digital environments, and international confrontations entail constant revision.

Currently, ownership uses recordation whereby transfers and licenses are documented to avoid conflicting ownership situations. Due to the recent extension of ownership rights to works from a few decades back as new ventures such as streaming and digital distribution take effect, §203 has drawn attention over the termination provision. For example, inheritors of musicians or authors often use termination rights to reclaim control overworks produced in in the 1980s and earlier years.

3.6 Preemption and Duration of Copyright

Beginning on and after January 1, 1978, federal copyright law displaces any state laws or common law rights in materials that are roughly equivalent to the ‘‘copyright’’ rights – to reproduce the work, to distribute it, or to perform or display it publicly. This applies to work which qualifies for copyright protection including one which is fixed in a tangible means of expression. It is possible that state laws may continue to safeguard idea, method, and unprotect able works, for which federal copyright will not apply; for instance, oral performances or improvisations. However, actions that accrued prior to January 1, 1978, are not touched. Liability asserted under laws other than the copyright act to reach the content of a work (e.g., misappropriation, contract, trespass, or invasion of privacy) remains permitted. The laws of state and local legislation, preservation laws and acts, and zoning laws do not exempt architectural works.

Sound recordings made prior to this date are not protected in accordance with federal copyright laws but may be protected under state copyright laws. Nevertheless, certain federal protections exist now by virtue of the Classics Protection and Access Act when it comes to covered activities. Federal copyright legislation does not preclude rights given under any other federal legislation or international treaties, the Berne Convention for instance. The rights akin to VARA (for example moral rights) are solely provided by federal law as from the date on which VARA became effective. Yet a state law may also regulate the rights not originating in VARA, such as violations that occurred later than the date the artist dies or other claims different from those covered by VARA.

Copyright shall subsist throughout the life of its author and 70 years after the author’s deaths.

This has an added effect of extending the protection of works far beyond the lifetime of the author. For works which were produced in collaboration with others copyright subsists for seventy years after the death of the last surviving collaborator.

These works have a fixed term:

1. After ninety-five years from the actual year the work was published. 2. Either, one hundred twenty years from the year of its creation.
3. If an author has registered a work for copyright and that work contains his/her identity, the duration will shift to the life plus 70 years. (17 U.S.C. § 302).

The life-plus-70-years term means creators and their families receive money for their creation long after the work is made. This is even more so true in the digital age where older products are sold through streams, license and merchandise. Because the renewal system for pre-1978 works allows authors or their estates to reclaim copyright or renegotiate terms, fair use provides an opportunity for noncommercial creators. The concepts of the termination also allow the creators to take back rights that might not have been valued optimally earlier, for instance, a song or a piece of literature that has been brought to lime light again.

3.7 Copyright Notice, Deposit, and Registration

Once original work has been published, the copyright owner can add a copyright notice to copies that are visually perceptible. While it is not necessary to do so by law due to the Berne Convention Implementation Act of 1988, placing a notice also puts those works into the public record as protected by this law. Symbol ©, the word "Copyright" or the abbreviation "Copr." It is the date at which the published first appeared in its current or any other form. 5 For compilations or derivative works, just the year of the new version is provided. The name of the copyright owner, or a recognizable caller, or label or logo used by the owner.

The notice must be placed in such a manner that a person using the work will be put on reasonable notice that the work is protected by copyright. The Copyright Office offers recommendations regarding acceptable placements depending on a type of the work. If a notice appears, defendants in copyright infringement cases cannot ask for "innocent infringement" defense that would help to limit liability.

Any published sound recording made with permission can place a copyright notice on phono records such as CD or vinyl records.

1. The symbol ℗ (P in a circle).

2. This will be in the form of year of the first publication.
3. If the work being entered is an independent work, then the name or owner of the Copyright to the work or the producer of the work.

For works that contain copyrighted materials with materials specific to the U.S government they must provide a notice of which parts qualify for the protection of a copyright. As for collective works, like an anthology of story's, a single copy right notice suffices for the entire work as the contributions of all the contributors are protected unless they contain individual notice. (Sections 403 and 404).

Section 405 of the Copyright Act of the United States of America requires that the owner of a copyright should send two copies of what he considers as the best version of the published work with the Library of Congress not later than three months after the publication had been done. For sound recordings, two phono records, and any other accompanying material must be deposited.

The Register of Copyrights may accept an exclusion for specific works if they are limited in availability or cost (the fees may be up to $250 for each work and the price for obtaining the copies). Reckless behavior can lead to a penalty of up to $2,500. Transmission programmed are exceptions because the Library of Congress may require or directly record particular works for preservation. In copyright protection, registration is not mandatory, nevertheless it is compulsory to register for the purpose of protecting certain rights (such as taking legal action in the case of infringement.). The copyright owner must submit:

1. An application form.
2. A filing fee.
3. Prints of the work (best edition).

Registration can be made for individual works, collections of works or contributions to periodicals. If there is some mistake with the existing registration or if the owner wants to add any new information he or she can sent in a supplementary registration in the Copyright Office.(17 U.S.C. §§ 408–412).Registration of the copyright is compulsory for suing for infringement of a U.S. work. For pre-publication infringement, preregistration is sufficient when the work is at risk. It started at the time of registration of the infringement. The work was registered within three months of publication (Sec 411- 412).

Due to the advancement in technology, authors often launch eBooks, online videos and digitized artwork and seek protection of their works against cyber thefts. The U.S has signed agreements such as the Berne Convention that protects foreign authors in the same manner as it

does its citizens. Registration and notice rules are applied now for such elements like NFTs, AI-created content, streamed media. It may be said that although there is a dynamic move towards ‘new’ copyright principles, the ‘old’ basics such as notice and registration are core tenets of the law.

3.8 Copyright Infringement, Remedies, and Liability under U.S. Copyright Law

Copyright infringement involves the infringement of the rights provided under sections 106 to 122 of the copyright act of any nation and which includes unauthorized making of copies or distribution of copies of the work or the public performance or display of the work. This also amounts to infringement if unauthorized copies are imported into the U.S. The owner of a copyright or an exclusive right under it may bring an action for infringement where the violation took place when the owner of the copyright was entitled to institute proceedings. Some courts might demand that notice be given of the existence of other individuals with an interest in the copyright and the defendants frequently allowed to enter the case. District courts have the power to grant interim or perpetual injunction to restrain or prohibit further act of infringement. These orders are nationwide restraining orders, and anyone who fails to honor them can be charged with contempt.

The copyright owner can sue for actual damages and any gain which the infringer makes from the copyright material. The owner must then counter with the revenue earned by the infringing party, and the infringing party must then show the expenses which can be deduced. The owner instead of actual damages can have statutory damages of from $750 to $30,000 for each work that has been infringed. In some cases, and where the infringement is willful, courts may enhance the award to $150 000.

1. If the infringer can show that he was not guilty of bad faith, the amount of damages awarded is further lowered to $200.
2. If the infringer acted willfully and without a license the court may on top of this award treble damages, which means the awarding of additional damages to the amount equal to twice the unpaid license fee.

The following are criminal consequences, anyone who commits the following will be charged as a criminal if one willfully infringes copyright for commercial purposes or purposes that result in revenue collection of more than one thousand US dollars’ worth of copies within one hundred and eighty days. Possible sanctions and punishments include these fines and

imprisonment. Providing a false copyright notice such as placing a fake copy right on a product or giving false information when registering a copyright attracts fines of up to $2,500. Clerks of federal courts have a one month rule in informing the Copyright Office that a copyright case has been filed or when there is a final judgement in the case, giving details of the work and parties.

The Digital Millennium Copyright Act (DMCA) even has specific provisions for OSPs as long as some certain conditions are met.

OSPs are protected if they:

1. That was not privy to the infringement.
2. Take action to notify the specified site administrator or user and to report any additional infringing material to the appropriate person/authority to have the infringing material/ link to the same removed or disabled as soon as possible. 3. Do not gain any sort of financial gain out of infringing activities.

Owners of small businesses with up to seven individually-owned facilities, such as restaurants or shops, may invoke the public performance license fees from performing rights organizations (ASCAP, BMI, and the like) in federal court. Until the problem is solved, the business may pay some of the amount into an escrow account through which its music can play. The last changes would be made after the court quantifies a reasonable fee.

In the modern conditions associated with the development of digital content and possibilities of the Internet, the issues of copyright infringement cases differ. ILLEGAL USES primarily refer to sharing on sites, or via P2P networks without permission. Website owners such as YouTube have put in place automatic services to delete or muzzle any unlawful content, while users appeal falsely claimed content under the DMCA. The newly emerged discussions are related to the possibilities of AI-generated works being protected by copyright, as well as how the cases of unauthorized usage in other works trained on AI dataset

3.9 Copyright Office's Responsibilities, Organization, and Emergency Authority

The Register of Copyrights shall be supervising all the administrative affairs of copyrights except as provided otherwise. Currently the Register is the director of the Copyright Office that functions under the Library of Congress. The chief executive of the NLM is Librarian of Congress, who hires the Register and other employees for the service.

The Register has several key roles, including:

1. Consulting Congress on national and international copyright affairs. 2. Providing advice to the federal department agencies and courts on issues relating to copyright.
3. Including attendance in official delegations, to meetings associated with copyright or other topics on the international level on behalf of the United States.
4. Research, educational events, and the formation of polices concerning copyright. 5. Engaging in other activities in response to the direction of Congress or for the protection of copyrights as provided by the law.

The Register's salary shall be as prescribed at the rate commensurate with other senior federal positions. The Office is administered by the Librarian of Congress who is supported by as many as four Associate Registers. The Register of Copyrights is empowered to set rules for the implementation of the copyright laws subject to the approval of the Librarian of Congress.(702). Whenever any act envisaged by the copyright laws is required to be performed within a prescribed time and the prescribed time falls on a weekend or a federal holiday, such act may be performed on the next business day. (703) Copyright guides all deposited works belong to the Property of the United States of America. Original works can be donated to Library of Congress for collection or maybe given to other libraries for collection. Unpublished works may also be transferred to archives or records centers. Such deposits may be destroyed; however, unpublished works are kept unless a microform duplicate has been created.

Payments are required for some of the services offered including charging for registration of copyright, renewal and record search services. There is also the ability for The Register to change fees according to the cost to administer and inflation independent of the Clinical Centre. Such provisions permit deposit of fees and the expenditure of income derived from such deposits to fund the operations of the Copyright Office. (Section 708).

Some of the benefits of dealing with the Copyright Office include; Catalogues of copyright registrations, free form applications. Other publications, like bibliographies, are sold at cost or distributed to depository libraries. (Section 707) By announced and proclaimed emergency, the Register of Copyrights can periodically alter, suspend or otherwise change the particular deadlines and processes that constitute the basic procedures of the copyright system, The adjustments must pertain only to that which relates to the timing or contractual provision and shall in no case be general or broad based but will be confined to the specific disruption The Register is also to inform the public about the changes and amendments made to it, and the changes made to it may be backdated if required. If the changes exceed 120 days, the Register shall provide the Congress with a detailed written report of the activities carried out and the reasons for such action. This authority does not include the provisions that call for court

activities, including the institution of lawsuits and other legal proceedings or the mandates concerning the term of copyright protection. In other words, the Register has a lot of emergency power albeit not over court rule or copyright term- related laws.

In such environment, an important factor that deserves attention is a role and functions of the Copyright Office. As there is a tendency towards digital works and global distribution, the Copyright Office has to adjust the laws granting the rights to the new technologies. The COVID- 19 crisis underscores the need to have flexibility as a feature of the copyright system because the Register had to exercise its exceptional authority to answer disruptions resulting from the pandemic. Moreover, The Office enables the public to have information on copyright records, and other changes may occur to the procedures or fees of the copyright system.

3.10 The Roles, Functions, and Procedures of the Copyright Royalty Judges (CRJs)

The Librarian of Congress employs three full-time Copyright Royalty Judges (CRJs) including the Chief Judge through consultation with the Register of Copyrights. These are specialized judges in relation to activities on copyrighting royalty rates and distributions. CRJs distribute royalties authorized under licenses, including cable retransmission or digital audio services. If controversies exist concerning the allocation, CRJs decide these controversies or approve partial distributions while controversies exist with respect thereto.

CRJs can decline royalty assertions if they are time-barred or built on a defective premise. CRJs fudge over procedural matters when conducting hearings and can allow exampling of hearsay evidence. The CRJs may undertake any other duties as may be delegated by the Register of Copyrights. Upon appointment, each CRJ must be an advocate with not less than seven years' experience in practice. It is mandatory that the Judges should be of considerable experience in the field of copyright law, economics or be involved in laying down judgements.

The party in the Chief Judge must have five years of experience in hearing or arbitration. First members are nominated for two, four or six years with subsequent terms for six years. Judges can be reappointed.

The determinations have to be given within 11 months from the end of the negotiation process. Rehearing's can be made in some circumstances, but where such application need to be made within fifteen days from the determination. The CRJ's determination may be appealed to the U.S. Court of Appeals for the District of Columbia by any aggrieved party in the next thirty days. Royalty payment settlements do not exempt any of the parties from the continuous

payment of royalties.

CRJ's work has become more extensive and diverse due to factors such as Rate setting has become crucial for artists and service providers as efficiency in streaming has grown, the adoption of artificially generated music and the collection of rights through block-chain technologies. The inflationary factors and conditions of the industry that affect the rates are reviewed periodically. CRJs go on to update their methods of operation, which incorporates online platforms for filing and hold hearings.

3.11 Semiconductor Chip Product Protection under U.S. Law

Electronic components that are made of layers of metallic, insulating, or semiconductor material for certain operational roles. Process of topological embedding of patterns in layers of semiconductor chips. These depict the real physical features of the chip and how it is expected to work when complete. A mask work is considered to be in its fixed state once the mask work is incorporated in a chip in a manner which is permanent. The mask work should not be emulation or the union of ordinary designs in the craft. Be a U.S. citizen or a U.S. Resident Alien or be an alien from a foreign country who will protect an applicant from persecution. Use the mask work for commercial purposes in the United States or in another qualifying nation.

Ownership rights refer to the legal rights of an asset that allow their bearer to use, control or transfer an asset and they can be sold, licenced or even inherited. Transfers have to be evidenced and put on public record with the Copyright Office. Those mask works that were made by employees of the United States government during their sincere service shall not be protected. An average protection lasts 10 years and protection expires on December 31 of the last year of protection.

The owner has the exclusive right to:

1. Reproduce the mask work.
2. Market or import semiconductor chips that contain a copy of the mask work. 3. Debate giving the power to others perform these activities.

Owners only need to provide mask work to the U.S. Copyright Office within two years of exploiting it for commercial purposes.

Foreign nationals can get protection in case their country gives similar rights or is considering doing so in some cases the U.S. President can extend protection to mask works from certain foreign states if they meet reciprocal and good faith measures standards. As AI has found its

way into the design of semiconductors, then it comes with interesting ideas about ownership and novelty.

3.12 Copyright Small Claims

The person or company who files a case at the CCB for infringement, no infringement, or misrepresentation. In a case, the defendant that brings an independent counteraction against the plaintiff. It embraces those who sue, those who are being sued, and lawyers representing them. The defendant in a claim filed in the CCB. The CCB offers the parties a non-adjudicative, consensual forum for addressing some definite copyright controversies not through the federal court. The CCB is staffed by three full time employees: the Copyright Claims Officers specialized in copyright law and in ADR. These are officials who are hired with the recommendation of the Librarian of Congress by the Register of Copyrights. (Section 1502)

1. Support Staff: At least two Copyright Claims Attorneys support the Board.

2. Compensation: Wages of the officers and attorneys are remunerated according to the federal government compensation protocol.

3. Location: The CCB works under the authority of the U.S. Copyright Office

Considering the future growth of digital content and the increased number of cases of violation of copyrights, the CCB offers non-confidential and affordable proceeds for those who have experienced such situations. As an independent institution from the federal court, it saves small creators a lot of money, which they may not afford in the first place when seeking justice.

Chapter 4: Path forward

4.1 Who Decides Whether Outputs Are Protected by Copyright?

The main issue arising from this is to determine which legal systems within a particular country or a state gets to determine whether some outputs should be allowed the protection of a copyright. In the case of US and EU, identifying the protection of copyright may involve lawmakers, judicial systems and administrative authorities and each plays a different part. While the US legislators make the base provisions regarding which categories of works can be protected by copyright, the same is done for the EU members. They regulate the extent, time and extent of copyright by way of statute.

United States

According to the US Copyright Act (Title 17 of the United States Code) the following is protected by copyright. Pursuant to this law, creativity that has been recorded on a medium of expression which include books music and even software qualifies for protection. Lawmakers also decide from time to time to tweak copyright rules to fit new issues say in digital content and artificial intelligence (AI).

European Union

In the EU, the idea of copyright is undertaken through directives and regulations which include Copyright Directive (Directive 2001/29/EC) and the Digital Single Market Directive (Directive (EU) 2019/790). These laws thus tend to synchronize the copyright rags in the member countries. It is worthy of note that while the legislators establish concepts such as originality, fixation and exceptions to copyright protection. It is legislators that spell out the legal requirements but it is not their discretion that determines whether a particular output should receive protection and that remains in the courts and administrative agencies, not lawmakers.

Courts have a major role in defining the fact whether the certain output is protected by copyright or not. They are expected to explain the specific legislation made by legislators and analyses concrete situations. A copyright collects whether or not the work satisfies the legal conditions for protection. The work should not be produced or contracted by the other and should at least be somewhat original. It has to be fixed in a tangible medium that is in a written or recorded format or stored on a computer Instruction.

And an alert reader is going to wonder at this point: You have to have a tangible article to begin with to fix something in the tangible medium; can a mere idea be protected? For example, in

Naruto v. Slater (2018) the application of copyrights to a monkey were taken to a US court and the court upheld the argument that copyrights can only be assigned to humans.

The same concept is applied on the EU courts with reference to originality as the expression of the author's intellectual creation. This standard was explained in cases such as Infopaq International A/S v or when the Court of Justice of the European Union (CJEU). European Courts also determine how AI produced work shall be placed under copyright. Most jurisdictions do not allow for copyright for works generated through AI but it is still a contentious issue as noted above. Courts always resolve individual actions that are brought before them but do so within the parameters set down legally and previous decisions on similar cases.

On some occasions, administrative agencies are involved in evaluating the qualification for copyright protection.

1. Registration of copyrights is done by the US Copyright Office. However, one thing that one needs to know is that registration is not compulsory when it comes to copyrights, but in case of a court trial, they act as proof of a work's copyrightability.
2. The Copyright Office may decline registration provided it finds that the work you intended to register does not have the degree of originality or authorship that is provided by law. For example, in 2023, the Copyright Office stated that automatic works produced exclusively by AI are not subject to copyright protection where the work has been made with the use of AI authorship, but has a substantial part of AI authorship.
3. There is no general registration of copyright for the member states of EU. Nevertheless, agencies in member states may also preserve copyright-related voluntary directories such as in situations where there are legal proceedings going on.

Administrative agencies make recommendation but do not offer a final decision, which is in the docket of courts.

Consequently, both the US and EU encounter difficulties in the identification of the copyright protection of works produced with the help of AI. Present laws are also strict in this regard virtually barring works generated purely by AI and thus, it doesn't qualify for copyright. Lawmakers in both jurisdictions are exploring whether laws already on the books can be modified to deal with these situations. For example, the regulation of AI European Union – AI Act may affect the future policies concerning copyrights. Technology-associated Web 2.0 and sharing and distribution have raised many questions concerning ownership and infringement especially when concerning user- generated content. In many cases, courts raise questions of

whether derivative works – including memes or remixes – can be considered as fair use/exceptions (US/EU). A subtle dissimilarity between the fixation criterion of the US and the concept of an intellectual creation of the EU can lead to disparate outcomes. WIPO as well as various endeavors meant to bring international copyright laws more into conformity still continue to the present.

4.2 Should There Be a Clear Rule or a Standard for the Copyrightability of AI-Generated Outputs?

The use of AI tools to generate content has been receiving criticism and contentious discussions across the world in relation to copyright for AI. In the US as well as in the EU, there is no definite answer to the question of whether the outputs produced by AI are capable of being protected by copyright. The challenge, therefore, arises in deciding if it is more effective to set specific unambiguous rule or promulgate amorphous standard. The United States Copyright law as embodied in the Copyright act demands that only human authorial works can qualify for copyright protection. The legal has always been supported by various courts to back this principle. For instance, in Naruto v. Slater (2018), the court has held that copyright cannot subsist in non-human entities that are in this case animals. The US Copyright Office has stepped in to note that works produced by machine or AI alone cannot be copyrighted. This is not the case where a human has a significant role in the AI production of the work (for example, as a leader of an artistic session); the sections authored by the human may be (US Copyright Office, 2023).

The EU points out that copyright can only relate to works stemming from the intellectual creation of the author. This calls for a linkage between the personality of the creator and the work (Infopaq International A/S v. Transparency and democracy in ownership structure: A comparative study of Sweden's largest cooperative newspaper, Danske dabbles Forewing (The Danish Newspaper Association), (Bettina Bengtsson, 2009). This is the reason why outputs due to exclusive operation by purely AI are commonly not qualified under the copyright law due to their lack of personality or intent. This directive (Directive 2019/790/EU) outlines elements of digital content and interfaces but does not contain rules regulating outputs registered by artificial intelligence. Both territories still consider the current approach to qualify of most AI-generated output as a case-by-case rather than having a defined rule across all industries. However what has resulted from this is uncertainty.

The rule would therefore remove any ambiguity for creators, users and developers of AI. For example, it is legal to assert that only works with substantial human participation are

protectable to some multiple of exclusive rights of a copyright owner. This means that Courts and Copyright offices would not have to interpret the claims based on a complex ACC, but rather straightforward using the simple rule of law. Well-defined rule can co-ordinate the universal practices on copyright issues, minimizing rivalries between nations with conflicts on those issues. Without clear intellectual property rights, to prevent the AI developers taking out copyright on practically everything that an AI system spits out, there was likely to be a serious impediment to thinking of new and creative ways to put out stuff that could be created by the artificial intelligence.

A standard aids courts and agencies to assess each case relative to the circumstances of each case. For instance, there are some copyright works that have been generated by AI with little contribution of human creativity, whereas there are some work that have been generated by the AI with no input of the human input. Technology evolves rapidly. An open standard is useful because it can be easily modified instead of changing the law every few years to accommodate new forms of AI creativity. The regulation could be fixed to prevent innovation in utilizing AI. It has been (or would have been) possible to set a standard that takes into account the level of human intervention and creativity, and thus, strike a proportionate measure that locates innovation within the tenets of copyright regimes. Let me remind the Court that the EU already uses a standard based on originality and the intellectual creation. As with previous frameworks, following a similar standard of AI-generated works could be a useful privacy regulation.

Whether or not a work involves ‘sufficient’ degree of human authorship to merit a copyright remains somewhat ambiguous. For instance, as a painter employs the services of an AI to create a piece of art but fine-tunes it manually, is such an artist inn clientele dinghy involved? If this case, then who is the rightful owner of an AI work created that is covered under the copyright laws? The programmer, the user of the AI tool, or the party that paid for the work? Unfortunately, this question is remains open: In March 2023 the US Copyright Office has published a decision that AI-created works where no human intervention is possible will not be granted copyright. This is in harmony with the traditional earmark of human authorship but which has remain vague regarding other issues of mixed works (US Copyright Office, 2023).

The EU has not moved on from its “intellectual creation” criterion, which still does not admit creations solely by AI. But debate continues about whether new laws governing AI are required, as they are different from issues involving traditional ICTs. WIPO and similar organizations are currently searching for the provisions of AI and Intellectual property. These efforts could lead to a set of best practices in common around the borders, though this is a slow process.

The US and the EU should work out and implement either purely clear-cut AI work categorization models – such as the no-copyrighting model – and the semi-clarified models – such as the human-input age or originality identification models. Encourage early WIPO-type or other discussions to help achieve international consistency in the rules on copyright in AI

4.2.1 Example Rule: "If a work is created using AI tools, it is not protected by copyright."

This rule implies that virtually anything produced through the help and assistance of an AI tool would not be subject to the law of copyright. The idea is straightforward: as AI does not contain human creativity and/or intent, the output is not qualified for copyright protection under the current laws in the United States (US) and the European Union (EU).This approach provides a direct answer to the problem on the protection of AI-generated works, and draws a line for creating and using AI-generated works. A rule like this is also helpful in provided specific direction to the creators of new AIs, the developers of new AIs, as well as the users of new AIs. It would be made clear to stakeholders that works produced from AI tools are not protectable under copyright laws. This does away with ambiguity and light the extent of litigations that would be prevailing within companies.

As it stands now, the current copyright law demands the author to be human. This rule is in harmony with the stand of the US Copyright Office that works that do not involve significant human participation cannot be copyrighted (US Copyright Office, 2023).

To qualify for copyright, the EU states that a work must be original from the author and is an intellectual creation. Employees possess well-developed formal motives, and therefore, acquire legitimacy for their collective action in the Swedish media market, 2009, Danske Dabbles Forewing). This rule can also be place in the EU shipping framework because AI is not capable of displaying intellectual purpose or imagination.

It provides protection to the value that human beings invest in their creations through retaining the copyrights for human works. The following is a reasonable guarantee that the incentive to create remains with individuals who afford originality and personal input into the work they can churn out huge volumes of content in a short span of time. If the outputs generated by AI were eligible to obtain copyrights, many creative industries would find themselves into the hands of organizations that own such systems. This rule is still healthy in terms of preventing AI creators from monopolizing the market with their AI-generated works.

The works created through AI should remain in the Public domain so that others may use and

improve on their creations. This encourages innovations for example in the field of art, music and software engineering in that combining efforts, will yield results. Deciding on who owns the AI work is not very easy especially when considering the developers, users or even those who commissioned the work done. Such problems are averted by a rule of law that AI productions cannot be copyrighted. Governments at the moment are in various state in dealing with the Issue of AI and Copyright. Although this rule might fit with US and EU approaches, it can contradict practices in the jurisdictions that consider the existing AI copyright regimes too limited. For the hybrid works, the rule could provide a test for assessing human participation "Any work produced by AI may be eligible for copyright if the human creator actively intervenes in the creative process." As it stands, they should strike a harmonious relationship of the US, EU, and international organization members especially the World Intellectual Property Organization (WIPO) in formulating policies for products that originate from AI within the shortest time possible to avoid disparities across the globe. We recommend informing governments and all the copyright offices about this rule as well as an idea of the advantages of the public domain with mentioning the avenue for human-authored contributions to AI.

4.3 Who Owns AI-Generated Outputs?

There are dilemmas with respect to ownership as well as the subject of copyright when it comes to work like Midjourney, DALL-E, and LookX. Within copyright legislation in the United States (US) and the European Union (EU), this problem overturns the conventional approaches to authorship and ownership. The workshop "Crafting the Future: AI, Creativity and Rights under AI & Creativum on various scholars and professionals' panels introduced these kinds of complications and provided readers with new ideas and practical examples to present this topic more thoroughly. The US Copyright Office comes out clear on the fact that copyright only protect works of authorship by humans. Recent decisions within these countries have rejected the claim to copyright of an AI outcome irrespective of the time spent on it by the creator. The US Copyright Office published a report on AI and copyright in 2023 to which over 10,000 comments responded, but the major legal issues regarding the AI-supported creative work are still beyond discussion.

According to the EU, in order to attract a copyright, works must contain an author's individual creation (Infopaq International A/S v. S.LINK: Danske Dagblades Forening, 2009). This emphasis made human creativity question the eligibility of AI work for a copyright. Both jurisdictions today, restrict copyright protection to works that are owned and created by human minds with certain level of originality, thus fully AI works are not protected by copyright.

Students and other working professionals interacted with generative AI tools like LookX in scenarios that were developed to show the complexities of human/ AI cooperation. Specifically three more exercises focused on different degrees of controllability and possessiveness.

1. Creating images from an array of words and command.

2. Starting with some forecast drawings or prototypes which steer the AI's activity. 3. Using the several tools and methods united in one complicated compendium.

A few reported having low control over direct outputs especially when applying prompt-based methods; on the other hand, most expressed high control when using their sketches. More output control was observed when more explicit ownership was demanded as when extensive manual intervention or repeated cycles were required. Some participants had a kind of intuition that if there is a strong human intervention into creation of the work, it should be protected by copyright.

This identity means that AI tools are becoming looked at as helpers rather than just tools and professionals using the technology must now do so in a considered manner. Technology industries require such legal initiatives that would correspond to such approaches. The use of generative AI widens new opportunities to license creative data and to discuss the questions of monetization. Unfortunately, although such opportunities exist, they are still not fully utilized due to the lack of legal framework for implementing them.

4.4 Achieving International Uniformity in Copyright for AI-Generated Outputs

The emergence of AI in the creative fields has posed global issues in copyright law to the world. As discussed earlier, the rules on what can be copyrighted tend to vary across countries; in specific, recent works, such as those designed by Artificial Intelligence (AI), are particularly controversial across the US and EU member states. Aim at global harmonization is necessary to avoid creating bias, encourage more invention and clear up legal ambiguities ailing creators and industries relying on AI. In reaction to this, the US Copyright Office has continued to proscribe copyrights from protection if they have been authored by artificial intelligence. Works processed with the help of Artificial Intelligence are not admissible if special human effort has been used in the process such as creative decisions or considerable interventions. Some recent examples include the rejection of the copyright of creations made solely with AI software (for example, the Thaler v.). Journals they have coauthored, including those by academic and professional services thought leader **Thomas V. Perl mutter**, and reiterate this stance.

Copyright within the EU is provided to those works which contain the expression of intellectual creation of the author. ALiMONA, courts have insisted that specifically human creativity must not merely have a role (copyright 2001) 'According to Edebalk & Oiesen (2009), Danske Dagblades Forewing is one of the most important elements mentioned (p.2009). EU standards imply that produced by artificially intelligent algorithms outputs which did not involve humans significantly may not meet the criteria for copyrights protection.

Such divergence between the US on one side, the EU and other jurisdictions on the other side creates hurdles for creators and industries, which are active globally.

But current international copyright agreements like the Berne convention already propose standards for harmonized laws on copyright. Nevertheless, these treaties do not apply to works created by AI in particular. There should emerge certain international norms as to what extent human authorship should be involved in production of AI-assisted work. Any work should arguably merit protection where the decisions made involve creativity or where some manual control is exercised. The following may not be copyrighted but could be afforded other types of protection such as sui generis rights meaning special rights for special circumstances.

Other models can be drawn by International organizations like the World Intellectual Property Organization (WIPO) then countries can adapt those models.

1. To bring a uniformity in copyright criteria of the works prepared with the algebraic help of AI.
2. Promote similarity in how conflicts are resolved.
3. Support cross border licensing and enforcement of rights.

It would help if 'black letter' rules applied to registration of AI-assisted works are consistent across borders to help avoid and control international disputes. An integrated or connected system with administrative control from WIPO or another international organization.

Introducing international uniformity towards copyright of AI generated outputs implies interaction, good comprehension, and consonant frameworks. Importantly, they must build their system of normative frameworks on axiological foundations utilizing contracts from other states along with the support of global cooperation and focusing on the needs of such a revolutionary invention as AI.

Chapter 5: recommendations and reforms proposal

5.1 Introduction

As artificial intelligence (AI) increasingly generates creative works autonomously, existing copyright regimes—rooted in assumptions of human authorship—struggle to adapt. These frameworks were not intended to deal with the complexities of machine created or produced content as well. This chapter critically discusses the imperfection of the existing legislative framework, conducts an enquiry into whether copyright ought to be managed around human beings alone, and offers reform models based on the progressions of other nation's legislation. It proposes a roadmap towards a future facing vision for a balanced, rights sensitive copyright regime in the age of generative AI.

5.2 The Human-AI Co-Creation Paradigm in Practice

A growing area of interest is the role of users—particularly students, educators, and content creators—in co-creating with AI. A recent empirical research in South Korea around South Korean university students showed some important insights regarding the process of authorship, creative control and perception of copyright when potential users of ChatGPT, like Bing Image Creator. Through the participation in iterative prompt refinement and feedback, participants were asked to generate visual interpretations of abstract concepts (e.g., freedom, modernity).

The results indicated that iterative human input can create a meaningful creative contribution and that repetition of prompt engineering made the personal connexion to the final outputs stronger. Despite the generative nature of the tools used, utilising multiple rounds of refinement made the results 'theirs' to the participants.

The three dominating themes of sentiment analysis on open ended reflections are (1) AI as a resource for a collaborative tool for producing creativity, (2) ambiguity and uneasiness in regards to authorship and originality, (3) asking for more transparent institutional rules about Markup use. Copyright perceptions ranged from full personal ownership to shared authorship or total uncertainty.

This emphasises that the existing legal definitions of authorship in collaborative environments with generative AI are insufficient. Especially educational institutions need to elucidate how

they keep these technologies to their norms of originality, intellectual property and academic integrity.

5.3 Why Current Laws Fall Short

Copyright law in most jurisdictions, including the United States and European Union, continues to require human authorship as a baseline for protection. According to the U.S. Copyright Office (2025) works not having been creative, whether human or not, are ineligible for registration. The debate has since restated legal and ethical uncertainty as generative AI tools are incorporated into creative workflows. Generative models are essentially trained on massive corpora including copyrighted materials usually without the permission nor the credits for the authors. Such opaque data practises per Al-Busaidi et al. (2024), Fenwick & Jurcys (2023), such as these, amount to undermining legal and moral trust in the system. Similar, the European Copyright Society also claims that the current nexus of the CDSM Directive and AI Act does not sufficiently encompass the AI life cycle (dataset collection to content dissemination) (Kluwer, 2025).

A landmark case from the Hamburg District Court (LAION case) underscored this gap. LAION, a nonprofit dataset aggregator, was challenged for including copyrighted content in its training data. While text and data mining (TDM) may be permitted for scientific research under Articles 3 and 4 of the CDSM Directive, no such protection exists for commercial deployment of generated content.

5.4 The AI Lifecycle and Legal Gaps

To understand where legal uncertainty arises, it helps to view the **AI lifecycle** in four phases:

- **Data Collection** – scraping or acquiring large datasets (often copyrighted),
- **Model Training** – transforming data into functional models via algorithms,
- **Content Generation** – producing new text, images, audio, etc.,
- **End Use** – distributing outputs, often commercially or academically.

Current legal protections primarily cover Phase 1 (with TDM exceptions) and partially address Phase 4 (e.g., disclosure mandates). However, Phases 2 and 3—where original authors lose visibility and outputs take shape—remain under-regulated (Al-Busaidi et al., 2024).

5.5 Should Copyright Law Evolve or Stay Human-Centered?

The debate over whether copyright should protect AI-generated works remains unresolved. Traditionalists argue that copyright serves to reward human ingenuity and expression (Syed & Hassan, 2024), while others contend that meaningful user input—such as prompt engineering or editing—should qualify as a creative act.

Cases such as DJ David Guetta's AI-assisted music production exemplify the challenges of binary human vs. non-human authorship (Fenwick & Jurcys, 2023). The ECS further contends that any future legal model must recognize layered contributions across the AI value chain, from developers to end users.

The ECS also stresses that copyright reforms should balance fundamental rights of authors and performers with innovation and public interest. This principle of "human-centric" and "trustworthy" AI is embedded in the objectives of the AI Act (Ceravolo et al., 2025).

5.6 Reform Models: Toward a Balanced Framework

5.6.1 Human Input Threshold for Ownership: A flexible model could allow copyright for AI-generated works when there is demonstrable human involvement—through creative prompting, editing, or curation. This aligns with the U.S. Copyright Office's position (2025), and is supported by ECS and the AI Act (US Copyright Office, 2025).

5.6.2 Sui Generis Rights for AI Outputs: For fully autonomous creations, limited protection could be granted through sui generis rights—allowing control over distribution and monetization, without traditional copyright privileges (Maidanyk, 2021).

5.6.3 Public Domain with Attribution Mandate: Other jurisdictions may favour allowing the public domain with attribution to the AI system or operator for some outputs of AI. The transparency principles of the Colorado AI Act and ECS recommendations are all things that the model is consistent with.

5.6.4 Licensing and Fair Compensation Framework: The (2025) based ECS wishes to include a compensation model via licencing, covering residual payments or cultural levies for original authors whose work is mined in training datasets. It adds to Article 18 of the CDSM Directive, requiring proportional remuneration in the AI value chain.

5.7 Policy Roadmap: Coordinated Action at All Levels

5.7.1 National Level: There is legislation that countries, like the U.S. could adopt after the Colorado AI Act, which requires AI work registration, transparency obligations and public audits. These would be in addition to other similar compliance measures under the EU AI Act (ECS, 2025).

5.7.2 International Level: WIPO must close this gap between the private copyright regime and the public AI governance sphere. In the case of the Digital Services Act, ECS (2025) suggests that hybrid enforcement models that might operate in AI contexts include such. AI related copyright rules (ECS, 2025) may be enforceable extraterritorially via the concepts of meta obligation and value chain accountability.

6 Conclusion

The study arrives at the increasing call to develop laws to regulate the intricate AI-created and AI-supported content. With further development of AI, it will easily be in the hands of the courts and policymakers to determine the place of such creations under copyright law. A territorial problem that is yet to be sufficiently responded to be the question of originality and human intervention in AI works in a few jurisdictions, the question of copyright in relation to AI-generated works has been addressed. Equally, moral rights in the type of work are normally recognized only where it is associated with a grievance involving human input. Due to advance and innovations in AI technology issues related to traditional copyright laws will persist thus leading to more legal and policy changes. The EU and US have set value and originality as requirements to acquire copyright protection, and AI output fails to meet both. Though the work performed with the help of artificial intelligence may fall into this category if the human component of work was substantive and innovative. Peculiarities of AI as the tool in creative industries remain the subject of constant debates and possible legal changes in both countries. EU and US copyright law possessing requirements of originality and human authorship leaves fully automated works without protection. However, given the critical role of these materials in the economy, there is need to review the existing approaches. Still, the EU has other types of protections offered through its sui generis database rights, which the US lacks. This is one way the governments of the two areas face the challenge of adapting copyright principles to incorporate the advances in automation and the incorporation of Artificial Intelligence in content production. Copyright protection of literary, artistic and like works depends more on human ingenuity and authorship. A fully automated ash product is unlikely to meet these criteria, whereas a work performed partially with human help might if it proves original. In the process of developing digital technologies, both Georgia and the USA remain exposed to constant obstacles in the regulation of copyright based on the automated and AI methods.

The EU and US still find themselves in the identical position as a Europe and US in relation to ambiguity of copyright law in the digital world. The current classifications of authorship that put human at the helm of authoring fail to incorporate any work that utilizes todays sophisticated technologies, and as such, there is inconsistency and lack of protection for works that could otherwise be consider worthy of protection. Closely tied with the seventh recommendation, the adoption of inventions-oblivious regimes oriented toward innovation and creativity rather than the author of the work would more appropriately dovetail the systems of copyright in the modern world. It is reforms that would guarantee to keep the copyright law as an important driver of creative work in the context of the digital world, since the law is based on

human creativity, and the works created by AI in full are not protected by the copyright law.

However, more complex forms of works, especially where human input is likely to be greater, may now meet this criterion, as are the legal rules still developing to tackle the new issues which generative AI creates. In the future, the courtroom and legislative decision makers will have to find how to encourage inventiveness and at the same time regulate copyright principles in relation to technological progress. Attribution of generative AI outputs is closely related to the question of who the author is according to the law and does the human creativity matter? Thus, until there are clearer rules on intellectual property in courts or legislatures, it will necessarily be regulated based on expected contractual provisions like the terms of service AI Company's offer. These contracts may provide ownership of the contracts to the user or the provider of the AI, based on the company's policies. However, as the use of generative AI increases further, the lawmakers of the EU and US will most likely have to clear up these questions and harmonies them with the progressing technologies. It is important that the users and the AI companies research on these aspects so that they may be on the safe side, and thus, the companies that produce the AI's might also be held responsible when necessary. The developments in the former are still unpredictable yet, both the courts in the former areas are concerned with basic tenets of copyright law such as access, substantial similarity and authorship. It seems, though, that with progressive development of generative AI technology such questions will have to be defined in more detail in law.

It is important to emphasize that the issue of copyright and technology is discussed in a dialogue mode. This is because each new advance in technologically related fields disrupts some aspect of copyright legislation and law. Neither the EU nor the US is ready to accept fossilized productions of copyright even in the late growth of the digital era; flexibility and adaptability thus become modern dictators of the evolving copyright laws. Cohesion on the other hand result from the principles inherited from civil law, common law as well as international agreements from the UN, although they may limit the necessary discretion compared to the contemporary challenges posed by a fast-changing world in general and technological context in particular. More especially, with EU currently in the process of strengthening its copyright legislation, the delicate balancing of tradition and innovation will be paramount. Consequently, the EU laws contain limited and restrained exceptions and limitations for copyright owing to its origin in the author's rights tradition. However, it guarantees creators a fairly powerful protection but still does not take into account the modern conditions of the computer network. For the future, a more balanced and less rigid copyright regime should be insisted on to help copyright law advance innovation and easier access to knowledge as well as foster correspondingly

developing technologies and societal requirements. Closure and fixation have become blunt tools in claims of authorship as brought by the digital revolution. These challenges have perhaps been transformed by various innovations by courts and the legislators but the gaps are still noticeable. To keep up with these requirements, the EU is in need of more open and 'soft' approaches while at the same time providing legal certainty to support creators, users and innovators in the digital environment, The distinction between idea and expression is one of the bedrock principles of copyright law, its deployment in relation to software and digital works has caused some issues. These issues are dealt with by the EU by placing a premium on originality and excluding works that are purely functional /technical from protection. In this way it's preserves aspects of digital works which deserve protection based on actual creativity and leaves aside development ideas and processes which are not eligible for copyright regulations. However, further development is still required to give clear and stable meanings in the rapidly changing technological environment.

EU copyright law is slowly transitioning toward filling the gaps of the digital age. On one hand, the objectives of a closed list of exceptions and limitations cause certain difficulties; on the other hand, the enhancement in recognizing them as user's rights is beneficial. Therefore, more legislative changes are required so as to make these rights actionable, protected from technological and contractual limitations, and harmonized with authors' rights. This balance is going to be a multi-faceted one, sensitive to innovation and fundamental rights alike.AI-generated outputs are going to be a problem for traditional copyright law, and the EU's definitions of originality and human authorship in particular. Substitutes such as public domain classification, or new legal regime have been proposed to work this out, but the attainment of the balance between innovation, users and rights of creators will need more masterly legal intervention. Thus, the interaction of the flexible interpretation of positions and targeted legal initiatives may be a key to the implementation of still-needed clarity in this area.

That indicates that the choice is between a bright-line rules or a standard in relation to the protection of AI output by a copyright applies to depending on the legal certainty and the ability to evolve. Therefore, the compromise approach, the programmatic part of which prescribes fully automated creations, and the guidelines for which remain rather broad fit mixed Authorship products, may be the best solution. Either the US or EU needs to address this issue to really provide better directions for creators, users and developers in the fast developing field of AI. An exclusion of AI-generated works from eligibility to copyright and their protection has simplicity and legal certainty to the extent compatible with the US and EU principles. This

preserves human creativity, and shuts out monopolization and promotes innovation by ensuring that the content created by AI remains in the public domain. However, the rule should be accompanied by standards to work with hybrid works related to human and artificial intelligence. Achieving the delicate balance between clear rules and sufficient openness to allow innovation can be one of the main challenges for the policy makers in today's rapidly growing AI technologies environment. The ignorance exhibited by the participants at the workshop made other participants realize that there is need to embrace a novel understanding of creativity and ownership especially in the emerging AI new world. For a new "social contract" between humans and AI to take hold, it needed to be built on a understanding of creative practises in the modern world. In this vein, this paper has suggested that the copyright system will only be optimally effective if the lawmakers allow the definition of the relevant legal rules to hew to certain clear yet flexible principles thereby enabling the copyright system to be responsive to the unique challenges that may arise from the ever changing information technologies.Generative AI has arrived, and its rise necessitates a rethinking of copyright law that transcends the either/or mentality of man versus machine. Reforms must take into account both technological reality and creative equity whether implemented through human input thresholds, sui generis protections, licencing schemes, or public domain models.Policymakers can create a copyright regime in line with frameworks like the AI Act and informed by the rights of humans and the right to innovation and success as identified by ECS and WIPO. The future of copyright will not be decided based on fighting against AI, but will instead be defined with the use of it in the legal realm.

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