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Keywords: creative industry, deepfake, copyrights, intellectual property

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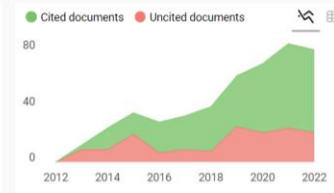
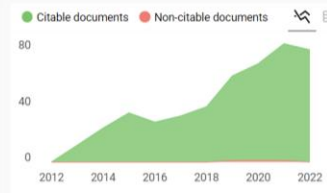
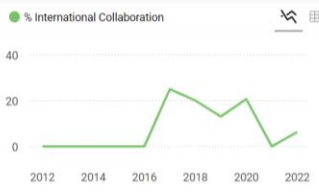
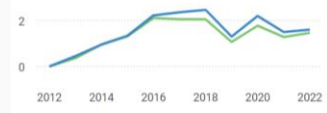
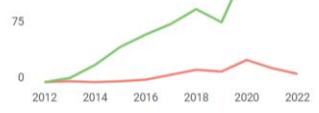
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Juridical Review of Copyright Infringement in the Use of Deepfakes in the Creative Industry in Indonesia

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Abstract

Law develops along with technological developments; hence both cannot be separated. In the current era, technology is developing very fast and often humans need to be protected from its uncontrollable use. This is where the law emerges to provide oversight and protection against violations created by technology. One of such technologies that violate legislation is deep fake technology. It is widely used in the creative industry which is fast emerging in Indonesia, and is closely related to the use of copyrights, which are facing a great threat from deepfake in the form of copyright violations. This study used normative juridical research methods to examine criminal acts in deepfakes. Several laws and legal studies were analyzed to identify factors regarding violations that occur when using deepfake technology in cyberspace. It was evident in the findings that deepfake is responsible for violation of the intellectual property rights, mainly the copyrights of the creator of works of art, and thus categorized as cybercrimes. The study treated deepfake as intellectual property violations, and also a cybercrime as there was the use of internet and computer technology and artificial intelligence to commit these crimes. The study implies that intellectual property rights are also like moral rights and economic rights.

Keywords: creative industry, deepfake, copyrights, intellectual property

Introduction

The history of mankind is that of change, registering humans as the most dynamic species. The changes in the human habitat have scripted the sociohistorical theory in the dimension of change which in principle says that society will always move, develop, and change from a simple social structure to a more modern one, in order to improve the standard of living. This theory seems to be proven by the modernization

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which started with the Industrial Revolution in the 18th century. The Industrial Revolution was also marked by a change in the production mechanism from the use of human power to the use of steam engines. In its development, this revolution continued until the Industrial Revolution 4.0 which was marked by technological advances such as the development of quantum computers, robots, 3D printing, nano technology, blockchain, Internet of Things to Artificial Intelligence (AI). Information technology in the current digital era is developing rapidly, and affects many sectors, including the economic sector. Various activities that were initially carried out by interacting directly with other people or visiting certain places can be done without going to that place and can be done via the internet (online) using a *smartphone* or computer. The development of technology and computer systems as well as the internet also causes the transmission of information and data to take place quickly and easily to be stored, searched, and shared (Rosadi, 2015).

AI technology continues to develop, which is marked by many implementations of AI. One form of this implementation is Deepfake. Deepfakes are engineered videos or digital materials created by advanced artificial intelligence to produce images and sounds that look and sound authentic. Deepfake is thus a type of artificial intelligence (AI) that is used to make photos, audio, video hoaxes that are quite convincing. Everyone can use this deepfake freely. This is marked by the emergence of smartphone applications that use deepfake technology. For example, the FaceApp application, which is currently being loved by various groups, has an AI-based feature that can change a person's face into a person who has the desired face. Creating a deepfake can be done by various methods. One method that is often used is the Deep Neural Networks (DNN) method, which is a set of algorithms designed to recognize patterns and process data in a complex way. Later in its development, deepfakes were refined through the presence of Generative Adversarial Networks (GAN) technology that can detect and correct deficiencies in deepfake videos. Deepfakes are thus created using two conflicting AI algorithms: one is called a generator, the other is called a discriminator. The generator, which creates the multimedia content, asks the discriminator to determine whether a content is genuine or fake. Together, they form a thing called a Generative Adversarial Network (GAN) (CNN Indonesia, 2022).

Deepfakes are created using the help of AI technology that can run on its own without human intervention. Deepfake technology makes it possible to change a person's face into a different person, for example into a cartoon character in an animated film or an image of a person's face. These changes are closely related to intellectual property rights, especially with regard to copyright (Pelupessy, 2017). Cartoon characters or someone's face image in a video or photo that is taken or cut and changed without permission from the creator or copyright holder is included in copyright infringement, especially if it is disseminated on social media. The advancement of the internet system and the ease of data exchange which is increasingly massive causes the vulnerability of intervention to personal data which is privacy. A person's personal data becomes easy to be disseminated and shared arbitrarily to publicly accessible spaces without the knowledge and permission of the data owner (Yuniarti, 2019).

In addition, deepfakes are also used to commit crimes. Technological developments have given rise to the phenomenon of deepfakes that can outwit

anyone indiscriminately. By using a deepfake, the perpetrator can deceive the target easily because usually the target does not realize he is being deceived. For instance, a deepfake case occurred during the 2020 US elections which made deepfake become a concern throughout the elections. A fake Barack Obama was released to show how dangerous technology can be in terms of mass propaganda. It showed Barack Obama saying obscene and inflammatory things. In another example, in August 2019, the public was shocked by the emergence of a face-swapping application called Zao. Users could register their phone numbers with Zao and upload photos. Users could then vote for celebrities that matched their faces. This phenomenon created a new model of fake news, which when used for negative purposes can threaten and harm personal data information. In the past, fake videos were often created with images that differed from the actual location and time, but advancement in technology have made it possible to control videos that allowed you to manipulate sound and scenes to look like they were created by someone to be who you should be like a real video.

The creative industry enjoys the legal protection in terms of economic and moral rights so that the members of this industry can develop properly. A creation is seen as the result of a series of thought processes of a person that requires time and energy. Therefore, according to the theory of appreciation, the creator of a work must be given protection and appreciation for the results of his efforts in finding the creation. The protection is intended so that a creation owned by a person cannot be used arbitrarily by another person without the permission of the creator of the creation. There is a dearth of studies that would analyze violations due to the use of deepfake technology, particularly when categorized as cybercrimes. There is hardly any study that could have examined the laws that are violated when deepfakes violate intellectual property rights of individual creators and also possibly copyright infringement and other actions that could be categorized as cybercrimes in implementation. In addition to intellectual property violations, deepfakes can also cause cybercrimes, namely pornography or fake news to the public.

The current study is based on the premise that a creation is entitled to the use of copyright from deepfake so that it cannot be violated. This study also challenges the argument that since deepfakes are run based on AI technology and that they are able to carry out certain jobs without human intervention, this raises a problem whether deepfakes which are created by AI are proven to contain elements of someone's creation that is legally valid and entitled to the use of copyright. This study recognizes that civil liability when a creator feels that his creation has been violated due to the existence of a deepfake that imitates his own creation. The study utilized the normative juridical approach to examine the extent to which deepfakes could be seen as criminal acts.

Literature Review

- *Artificial Intelligence*

Of the many technologies that exist in the Industrial Revolution 4.0, the existence of Artificial Intelligence seems to take quite a lot of attention with its uniqueness. Artificial Intelligence, abbreviated as AI, is a simulation of the intelligence possessed by humans which is modeled in machines and programmed to think like humans. AI can do certain jobs by itself without human intervention. AI is capable of performing

one of the following four types of actions: Acting humanly, a system that can act like humans; Thinking humanly, a system that can think like humans; Thinking rationally, a system capable of thinking rationally; and Acting rationally, a system capable of acting rationally (Atsar & Sutrisno, 2022). Currently, AI technology has been widely applied in various fields of life that aims to facilitate human activities. For example, a virtual assistant on a smartphone. This virtual assistant is able to help us in finding the information we need using only our voice. For example, if we want to find the nearest restaurant, we just need to ask the virtual assistant directly and it will immediately provide the answer in a short time. AI technology is the beginning of the production process and administration entered a more advanced stage with an automated and digitized system. Although AI appeared in 1956, but the theories that lead to AI have appeared since 1941, the term AI itself was put forward in 1956 at the Dartmouth conference (Sutojo, Mulyanto, & Suhartono, 2011).

The trend of using AI has penetrated the creative industries such as advertising, novel writing and painting. Expert Staff to the Minister for Reform and Regulation of the Ministry of Tourism and Creative Economy (Kemenparekraf), Ari Juliano Gema exemplifies several artworks that utilize AI such as "The Next Rembrandt", an advertising project ordered by ING Bank to J Walter Thompson, an advertising agency in 2016. This AI project analyzed 346 paintings by Rembrandt van Rijn, a Dutch painter who is also known as the greatest painter in European art history. If Rembrandt were still alive today, he would most likely paint a man aged 30-40 years old, wearing a black shirt and hat, and the position of the face from the right side. "The ad went on to win over 60 advertising awards," (Rizki, 2020).

- *Use of Deepfakes in society*

The development of Artificial Intelligence has given rise to a certain algorithm called Deepfake Technology. Deepfake basically consists of two words, namely deep learning and fake. Deep Learning is a machine learning technique by imitating how the nervous system of the human brain works (Henny, 2021), while fake means unreal or illusory. Thus, a deepfake can be interpreted as a fake video or an illusion created by using AI deep learning technology. Deepfake is also a term used for an algorithm that has a working system that can change the face of one actor into another actor's face in photos and or videos so as to produce photorealistic in the sense of an artistic style that represents a subject in an accurate and detailed direction, such as a photography. So lately, deepfakes are widely used to manipulate photography and videography to manipulate one person's face into someone else's face (Koopman, Rodriguez, & Geradts, 2018).

Deepfakes are created using the help of AI technology with the Deep Neural Networks (DNN) method. DNN involves autoencoders with face swapping techniques. In creating a deepfake, you need a target video that will be used as a video base. Then a collection of video clips of the desired person is inserted into the target video. After that, the AI will do its job to study the video and understand what the person looks like from various angles and environmental conditions. Furthermore, the deepfake results will be refined by Generative Adversarial Networks (GAN) technology which is able to detect and correct deficiencies in deepfake videos.

In its application Deepfake has been interesting widespread attention due to the use of these technologies in in celebrity porn videos, fake news, hoaxes and scams financial. This also invites responses from individuals, organizations, industrial and government entities to detect and limit their use (Congress.gov, 2019). It has been cautioned in a study at University of Southern California, which stated that the Deepfake that made for malicious use, such as fake news, would be more dangerous if no steps are taken in spread awareness of the Deepfake technology (Mosley, 2019).

- *Copyright in the Creative Industry in Indonesia*

The creative industry relies on talent, skills, and creativity which are the basic elements of every individual. The main elements of the creative industry are creativity, expertise, and talents that have the potential to increase welfare through offering intellectual creations. This industry will focus on empowering the creativity of an individual (Simatupang et al., 2009). According to the United Nations Conference on Trade and Development, creative industries are: (1) the cycle of creation, production, and distribution of goods and services that use creative and intellectual capital as the main input; (2) they are the part of a range of knowledge-based activities, focused on the arts, which have the potential to generate revenue from trade and intellectual property rights; (3) they consist of tangible and intangible intellectual products or artistic services with creative content, economic value, and market objectives; (4) they facilitate cross-sectoral association between arts, services, and industry; and (4) they are part of a new dynamic sector in the world of trade (UNCTAD, 2008).

The classification of creative industries determined by each country is different. Creative industries in Indonesia are divided into several sub-sectors according to the Creative Economy Agency namely, Culinary, Fashion, Crafts, Interactive Games, Music, Photography, Fine Arts, Film, Television and Radio, Publishing, Architecture, Advertising, Performing Arts, Product Design, Interior Design , and Visual Communication Design (Anwar, 2022).

The concept of copyright protection grew and developed since the invention of the printing press by J. Gutenberg in the 15th century in Europe. The copyrighted works are much easier to publish by reproducing them through a printing press. At the outset, the term 'author rights' was used and considered to have less broad scope of meaning, because the term gave the impression of a narrower meaning, as if the rights covered were only of the author's, and nothing to do with other entities involved. When it was replaced with the term 'copyright', it was considered to have a wider scope of protection (Lutviansori, 2010). Copyright literally has the use of the word 'rights' which is associated with obligations of an authority given to a party or parties that are free to use or not (KBBI, 2008). There are two important elements that are used in the formulation of the terminology of copyright: Moral rights that under any circumstances, and in any way cannot be abandoned; Rights that can be transferred to other parties (economic rights) (Saidin, 2015).

Article 1 point 1 of Law Number 28 of 2014 concerning Copyright defines 'copyright' as the exclusive right of the Creator that arises automatically based on declarative principles after a work is manifested in a tangible form without reducing restrictions in accordance with the provisions of the legislation. The

copyright holder is the creator and the owner of the copyright, and also the party who receives the right legally from the creator (Pelupessy, 2017). Copyright arises by itself (automatically), when the creator realizes his idea in a tangible form. With the existence of an idea, a creation is born. Such creations that are born can be announced and their copyright remains with the creator until they are published (Lutviansori, 2010). Legal protection through copyright today protects the works or creations of authors, creators, artists, musicians, playwrights, programmers, and others, namely protecting the rights of creators from the actions of other parties who without permission produce or imitate their work (Purwaningsih, 2005).

Hence, the creator is a person or persons who jointly derive a creation from inspiration based on the ability to think, using their imagination, dexterity and skills or expertise that are benefited in a unique and personal form and who own the copyright unless otherwise specified (Paserangi, 2011). The creator himself or herself is usually the copyright owner or a person who receives that right from the creator, or another person to whom this right is transferred by the current copyright owner. Such a transfer of copyright from the creator to another person, and then further a transfer of copyright to another by the one who receives the copyright, should be carried out only by the author through a submission or granting of a license (Lindsey et al., 2013).

Traditionally, copyrights have been applied to books and other publications, but now copyright has expanded to include even the protection of literary, dramatic, musical and artistic works including sound recordings, films and television broadcasts, and computer programs. A copyright when granted for a work lasts for the life of the author and 50 years after the death of the creator (Lindsey, 2011). If there are parties who carry out actions that should be the exclusive rights of the creator without permission, it can be said that there has been a copyright infringement. A copyright infringement also occurs if there is a violation of the norms of limitation and fair use (Jened, 2014).

Methodology

This study is a result of identification and exploration of factors of copyright infringement in the use of deepfakes in the creative Industry in Indonesia, having found those factors through a self-administrated survey of legal documents, copyright laws, lawsuits and judgments (Disemadi, 2022). The factors being focused upon in this research included individual factors, legal factors, as well as those that deal with cyberlaws applicable on copyright infringements. This study is qualitative in nature, and the data was analyzed through a content analysis using a case study based approach (Yin, 1992).

The researchers took a more critical approach to determine which categories were more vulnerable to deepfake technology or where copyright infringements were more frequent. Table 1 lists a few categories which, directly or indirectly, faced the potential threat of copyright infringement through deepfake crimes. These categories included copyrights related to economic rights, works of science, art, and literature, and copyright protection of works that are valid for 50 (fifty) years from their first announcement.

Table 1. Categories of copyrights

Category	Items	Concerned Law
Copyrights related to economic rights	9	Law Number 28 of 2014 concerning Copyright
Copyrights related to works of science, art, and literature	19	Law Number 28 of 2014 concerning Copyrights
Copyright protection of works that are valid for 50 (fifty) years from their first announcement	10	Law Number 28 of 2014 concerning Copyrights

The approach used in this research was a normative juridical approach (Soemitro, 1988) which enabled a discussion of doctrines or principles in legal science recognizing the use of deepfake technology as cybercrimes which can also be termed as intellectual property violations. The normative juridical approach is further useful legal approach as it looks at regulations, both primary and secondary legal materials with the problem solving approach in terms of applicable legislation (Ali, 2009).

Result and Discussion

- *Copyrights as protection to the creators*

Information and communication technology has changed the behavior of society and global civilization. In addition, its development makes the world borderless and significant social changes take place so quickly (Ramli, 2004). Internet technology connects one computer to many computers throughout the world by having the ability to cross national borders easily (borderless world), which has given birth to a new era known as the digital era. This digital era is characterized by the ease of interaction between people around the world by utilizing the internet network and without being hindered by the geographical area of a country and its territorial rules. In line with that, this digital era is marked by other characteristics in the form of the ease with which everyone can obtain information. Information in this era is very easy to obtain, exchange, access and distribute and transmit anytime and anywhere. Undeniably, the internet has become the most popular means of communication today. Various levels of society, ranging from entrepreneurs, artists, singers to ordinary people have enjoyed the benefits of the internet. Not surprisingly, websites or sites on the internet continue to grow from time to time (Rantung, 2014).

In the context of this study, it is evident that the internet network provides its own advantages for creators and copyright holders to announce or reproduce their creations to benefit from their creations. However, problems can arise if the party who announces or reproduces the work is a completely uninterested party; who can directly or indirectly harm the creator; therefore, Law Number 24 of 2014 concerning Copyright protect creators from things that can harm the author. In the legal configuration, moral rights include two major things, namely the right of paternity or the right of paternity and the right of integrity. Right of integrity is all forms of attitude and treatment related to the integrity or dignity of the creator, as contained in Article 5 paragraph (1) letter e.

Article 6 of the Berne Convention stated three substances of moral rights which included (i) the right to claim authority, namely the right to get recognition as an author. This is done, among others, by mentioning or including the name of the creator in the creation; (ii) The right to object to any distortion, mutilation, or other modification of the work, namely the right of the author to refuse actions that can distort, cut or eliminate part

of the work or modify the work in such a way that damages or harms the reputation and honor of the creator; and (iii) The right to object other derogatory actions in relation to the said work, namely the right of the author to refuse any form of action or treatment that may disturb or degrade the honor and reputation of the creator.

The legal documentation research revealed several trends associated with copyrights, pertaining to economic rights, copyrights related to works of science, art, and literature, and another category of copyright protection of works that are valid for 50 (fifty) years from their first announcement. Table 2 presents the nine items related to economic rights as exclusive rights of the author or copyright holder to obtain economic benefits from the works, stipulated under Article 9 of Law Number 28 of 2014 concerning Copyright.

Table 2. Copyrights related to economic rights

Category	Items
Copyrights related to economic rights	publication of Works; Reproduction of Works in all its forms; translation of Works; adapting, arranging, or transforming the Works; Distribution of Works or copies thereof; performances of Creation; Announcement of Works; Creative Communications; and creation rental

The study revealed that everyone is prohibited by relevant laws from making commercial use, reproduction, announcement, distribution, and/or communication of the portraits made for the purposes of commercial advertisements or advertising without the written consent of the person being photographed or his heirs. Table 3 presents the 19 items related to protected works as stipulated in Article 40 of Law Number 28 of 2014 concerning Copyrights include works in the fields of science, art, and literature:

Table 3 Copyrights related to works of science, art, and literature

Category	Items
Copyrights related to works of science, art, and literature	books, pamphlets, representations of published works, and all other written works: lectures, lectures, speeches, and other similar creations; teaching aids made for the benefit of education and science; songs and/or music with or without subtitles; drama, musical drama, dance, choreography, wayang, and mime; works of art in all forms such as paintings, drawings, carvings, calligraphy, sculptures, sculptures, or collages; applied art; architectural works; map; batik art or other motif art; photographic works; Portrait; cinematographic works; translation, interpretation, adaptation, anthology, database, adaptation, arrangement, modification and other works resulting from the transformation; translation, adaptation, arrangement, transformation, or modification of traditional cultural expressions; compilation of Works or data, either in a format that can be read with a Computer Program or other media; a compilation of traditional cultural expressions as long as the compilation is an original work; video games; Computer program.

Likewise, Law also allows copyright protection of works that are valid for 50 (fifty) years from the first announcement as evident in Table 4:

Table 4 Copyright protection of works that are valid for 50 (fifty) years from their first announcement

Category	Items
Copyright protection of works that are valid for 50 (fifty) years from their first announcement	photographic works; Portrait; cinematographic works; video games; Computer program; the appearance of the written work; translation, interpretation, adaptation, anthology, database, adaptation, arrangement, modification and other works resulting from the transformation; translation, adaptation, arrangement, transformation or modification of traditional cultural expressions; compilation of Works or data, whether in a format that can be read by Computer Programs or other media; and compilation of traditional cultural expressions as long as the compilation is an original work,

• *Deepfake and copyright protections*

Deepfake technology is used to make videos that can be protected by copyright because they are the products of a creative idea or a creator’s imagination. Thus becoming eligible for intellectual property rights. The problem that occurs is that many parties who make these deepfake videos take an animated character, face, or video of a person but without the permission of the party who made the source photo or video. The World Intellectual Property Organization (WIPO) published a “Draft Issues Paper on Intellectual Property Policy and Artificial Intelligence” in December 2019 (Álvarez-Risco & Del-Aguila-Arcenales, 2021). There are two questions devoted specifically to deepfake issues in the WIPO Draft: (i) Deep fakes are created based on data that may be subject to copyright, ownership being a copyright related issue in deep fakes; and (ii) A fair profit sharing system for people whose resemblance and “show” is used in something that is deceptive in nature because it is not genuine.

Over the years, digital images and video recordings have allowed verifiable and reliable evidence under the silent witness theory. However, if deepfakes continue to be produced, verification of these images will become more blurred and difficult to prove thereby increasing scrutiny of all digital evidence. This occurs in various aspects from entertainment to pornography. Whatever the context, the legal system must anticipate and adapt to the dramatic changes that arise under the advent of deepfakes especially because their spread and influence is difficult to contain. Even though the work in the form of animation, portraiture, or cinematography that is the source of making the deepfake may still be protected by copyright. Copyright contains exclusive rights in the form of moral rights and economic rights. Taking characters without the author's consent, or taking portraits, changing or cutting without the author's permission for someone's face is a copyright violation related to moral rights. One of the moral rights is to have his work recognized in its entirety, which is in accordance with Article 6 of the Berne Convention. Often the results of deepfakes

do not mention the origin of the work that is used as a reference for its creation which also violates moral rights, namely the right to be recognized as the creator.

Moreover, this new work in the form of a deepfake is used for commercial purposes, the creator of the taken work should also get economic benefits because without the work of the original creator, the deepfake work would not exist. It will be fair and respect someone's work by writing down the source of the work taken or adapted, asking the author's permission to use or modify the work, as well as sharing the economic benefits of using the author's work.

- *Deepfake arrangements in cybercrimes in Indonesia*

Indonesia has regulations regarding cybercrime in the electronic information and transaction law. There are several regulations regarding activities carried out via the internet and violating the law. For deepfakes, Indonesia does not yet have special arrangements. However, if a deepfake causes several criminal acts, then it can be punished according to cybercrime regulations in Indonesia. The legal arrangements regarding the spread of hoaxes above are regulated in Article 28 paragraph (1) of the information and electronic transaction Law, which reads that "Every person intentionally and without right spreads false and misleading news that results in consumer losses in electronic transactions." Meanwhile, the criminal threat is regulated in Article 45A paragraph (1): "Anyone who intentionally and without right spreads false and misleading news that causes harm to consumers in Electronic Transactions as referred to in Article 28 paragraph (1) shall be punished with imprisonment for a maximum of 6 (six) years and/or a maximum fine of IDR 1,000,000,000.00."

Article 45 paragraph (3) of the information and electronic transaction Law, stipulates "Any person who intentionally and without rights distributes and/or transmits and/or makes accessible Electronic Information and/or Electronic Documents containing insults and/or defamation as referred to in Article 27 paragraph (3) shall be punished with imprisonment for a maximum of 4 (four) years and/or a maximum fine of Rp. 750,000,000.00 (seven hundred and fifty million rupiah). Article 27 Paragraph (1) of the information and electronic transaction Law states that: "Every person intentionally and without rights distributes and/or transmits and/or makes accessible Electronic Information and/or Electronic Documents that have content that violates decency" while the criminal threat is contained in Article 45 paragraph (1) of the ITE Law, which states "Every person who intentionally and without rights distributes and/or transmits and/or makes Electronic Information and/or Electronic Documents accessible that has content that violates decency as referred to in Article 27 paragraph (1) shall be punished with imprisonment for a maximum of 6 (six) years and/or a fine of a maximum of IDR 1,000,000,000.00".

Conclusion, Recommendations and Implications

Technological developments are unavoidable and can even help human life. Inhibiting the development of technology is tantamount to inhibiting one's creativity, especially in the era of the creative industry. Deepfakes that are currently being widely used and/or developed can have positive but negative impacts. The use of deepfakes is good if there is no violation in its creation, in this case it is copyright. Copyright infringement that may exist from the use of deepfakes is a moral right when a work that can be a character, photo/portrait, or video is used without

acknowledging the source or the work is changed, cut, or modified without the permission of the creator. Violation of economic rights can also occur when the deepfake is adapted or distributed without the permission of the creator and the creator does not get economic benefits. Data manipulation is of course closely related to contexts such as intimidation, extortion, fake news, and political sabotage. Protection of personal data, as well as renewal of regulations related to intellectual property related copyrights is something urgent to deal with individual privacy, the potential for the spread of misinformation, pornography, and economic rights of creation. The government needs to make special regulations regarding deepfakes so that they are not misused by irresponsible parties.

References

- Ali, Z. (2009). *Legal Research Methods*. Jakarta: Sinar Grafika.
- Álvarez-Risco, A., & Del-Aguila-Arcentales, S. (2021). A note on changing regulation in international business: the World Intellectual Property Organization (WIPO) and artificial intelligence. In *The multiple dimensions of institutional complexity in international business research* (pp. 363-371). Emerald Publishing Limited. <https://doi.org/10.1108/S1745-886220210000015020>
- Anwar, M. C. (2022, August 11). *Understand 17 Subsectors of the Indonesian Creative Economy and Examples*. Kompas.com. <https://money.kompas.com/read/2021/09/18/150044626/pahami-17-subsektor-ekonomi-kreatif-indonesia-beserta-contohnya>
- Atsar, A., & Sutrisno, B. (2022). Tanggungjawab Kecerdasan Buatan Sebagai Subjek Hukum Paten Di Indonesia. In *Proceedings of Justice Conference* (Vol. 1, pp. 1-14).
- CNN Indonesia. (2022, 29 Jun). *What is a Deepfake and How to Detect It?* <https://www.cnnindonesia.com/technology/20220628173304-185-814660/apa-itu-deepfake-dan-cara-mendeteksinya>
- Congress.gov. (2019). *H.R.3230 - 116th Congress (2019- 2020): Defending Each and Every Person from False Appearances by Keeping Exploitation Subject to Accountability Act of 2019*. <https://www.congress.gov/bill/116th-congress/house-bill/3230>
- Disemadi, H. S. (2022). Lenses of Legal Research: A Descriptive Essay on Legal Research Methodologies. *Journal of Judicial Review*, 24(2), 289-304. <http://dx.doi.org/10.37253/jjr.v24i2.7280>
- Henny, C. (2021). *Get to Know What Deep Learning Completely Is*. <https://www.linkedin.com/pulse/mengenal-apa-itu-deep-learning-complete-chandra-henny/?originalSubdomain=id>
- Jened, R. (2014). *Copyright Law*. PT. Citra Aditya Bakti.
- KBBI. (2008). *Big Indonesian Dictionary (KBBI)*. Balai Pustaka: Jakarta. <https://opac.perpusnas.go.id/Detailopac.Asp?Id=24761>
- Koopman, M., Rodriguez, A. M., & Geradts, Z. (2018). Detection of deepfake video manipulation. In *The 20th Irish Machine Vision and Image Processing Conference (IMVIP)* (pp. 133-136). <https://www.researchgate.net/publication/329814168>
- Lindsey, T. (2011). *Intellectual Property Rights An Introduction*. Bandung : Asian Law group.
- Lindsey, T., Damian, E., Butt, S., & Utomo, T. S. (2013). *Intellectual property rights*. Alumni. Bandung.
- Lutviansori, A. (2010). *Copyright and Folklore Protection in Indonesia*. Yogyakarta: Science Graha.

- Mosley, T. (2019, October 02). *Perfect Deepfake Tech Could Arrive Sooner Than Expected*. WBUR. <https://www.wbur.org/hereandnow/2019/10/02/deepfake-technology>
- Paserangi, H. (2011). *Intellectual Property Rights Legal Protection for Computer Program Software Copyrights in Relation to TRIP's Principles in Indonesia*. Jakarta: Rabbani Press.
- Pelupessy, E. (2017). *Intellectual property rights*. Malang: Media Intelligence.
- Purwaningsih, E. (2005). *Development of Intellectual Property Rights Law*. Bogor: Ghalia Indonesia.
- Ramli, A. M. (2004). *Cyber Law and Intellectual Property Rights, in the Indonesian Legal System*. Bandung: Refika Aditama.
- Rantung, R. A. (2014). Copyright in Internet Networks Judging from Law Number 19 of 2002 concerning Copyright. *Jurnal Hukum Unsrat*, 2(1), 101-112. <http://repo.unsrat.ac.id/id/eprint/421>
- Rizki, M. J. (2020, 2 July). *Questioning Copyright Protection in the Utilization of Artificial Intelligence*. Hak Cipta Milik Hukumonline.com. <https://www.hukumonline.com/berita/a/menyoal-perlindungan-hak-cipta-dalam-pemanfaatan-artificial-intelligence-lt5efd7b7e3097a>
- Rosadi, S. D. (2015). *Cyber-Law Aspects of Data Privacy According to International, Regional and National Laws*. Jakarta: Refika Aditama.
- Saidin, O. K. (2015). *Legal Aspects of Intellectual Property Rights*. Jakarta: Raja Grafindo Persada.
- Simatupang, T. M., Yudoko, G., Handayati, Y., Pascasuseno, A., Permadi, K., & Listiani, W. (2009). Analysis of creative industry development policies in the city of Bandung. *Jurnal Manajemen Teknologi*, 8(1). <https://www.researchgate.net/publication/233994128>
- Soemitro, R. H. (1988). *Method Legal and Jurimetric Research*. Ghlmia Indonesia.
- Sutojo, T., Mulyanto, E., & Suhartono, V. (2011). *Artificial Intelligence* (1st ed.). Bandung: Andi Offset.
- UNCTAD. (2008). *Creative Economy Report*. United Nations Conference on Trade and Development. https://unctad.org/system/files/official-document/ditc20082cer_en.pdf
- Yin, R. K. (1992). The case study method as a tool for doing evaluation. *Current sociology*, 40(1), 121-137. <https://doi.org/10.1177/001139292040001009>
- Yuniarti, S. (2019). Legal protection of personal data in Indonesia. *Business Economic, Communication, and Social Sciences Journal (BECOSS)*, 1(1), 147-154. <https://doi.org/10.21512/becossjournal.v1i1.6030>