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by Norma Kinanty

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Norma Kinanty

Faculty of Law, Universitas Sebelas Maret, Surakarta, Indonesia
Ir. Sutami street, no. 36 Kentingan, Jebres, Surakarta, Jawa Tengah, Indonesia 57126
normakinanty@student.uns.ac.id

Bambang Santoso

Faculty of Law, Universitas Sebelas Maret, Surakarta, Indonesia
Ir. Sutami street, no. 36 Kentingan, Jebres, Surakarta, Jawa Tengah, Indonesia 57126
bambang santoso@staff.uns.ac.id

Abstract—This journal focused on the juridical analysis of legal protection for the victims of Artificial Intelligence misuse based on Indonesia's Law. In this context, AI misuse refers to the use of AI technology that harms an individual or group, physically, mentally, and financially. Firstly, this journal explored how Indonesia's law protects the victims of AI misuse. Although Indonesia has developed some regulations and policies, the legal protection of the victims of AI misuse still has become a challenge. The existing laws did not cover the specific aspects of AI misuse, including data privacy, algorithm discrimination, and other social impacts. Secondly, this journal discussed the challenges and obstacles in implementing legal protection for the victims of AI misuse in Indonesia. Some vital challenges included the lack of a general understanding of AI, specific laws for AI, and the gaps between the technology advancement and the existing law. Moreover, another challenge came from the lack of an international law framework that regulates the use of AI. This journal suggested the need for regulation improvement, public education about AI, and international cooperation in regulating AI. Besides, further research is needed to understand the bad impact of AI misuse and how the law can be more effective in protecting the victims.

Keywords— *Artificial Intelligence, Legal Protection, Misuse*

I. INTRODUCTION

The advancement of technology has shown its progress in every country, not only in developed countries but also in developing ones. The previous focus of the Industrial Revolution was using electronics and technology to automate the production process. However, in the era of the fifth industrial revolution (5IR) nowadays, there is a great bond among humans, machines, and data. The main technology in the fifth industrial revolution (5IR) covers the Internet of Things (IoT), artificial intelligence, useful technology, advanced robotics, and 3D printing. The technology highlighted the importance of using effective and efficient resources to improve human performance. [1] Artificial Intelligence (AI) is a field of study focusing on creating intelligent machines using special computer programs. This involved replicating human intelligence in machines and covered design, construction, and computer system implementation. AI enables machines to finish a task and solve a problem with intelligence similar to humans but with more efficient aspects. Based on a survey in 2019, 37% of world organizations have integrated AI into their operational system and activity. The survey also mentioned that 89 countries have increased the use of AI by 270% in the last four years, with a significant three times improvement in one year. AI was developed to solve complicated and ambiguous human behavior by applying effective reasoning for machines. AI system offers a unique platform for innovation and advancement.

In nowadays era, artificial intelligence technology (AI) has become part of our daily life integration. AI has changed how people interact with the world, from the way of speaking, working, and learning, to making decisions. However, as AI advances and spreads, there are some challenges and ethical issues, including AI misuse that harms an individual and groups.[2]

AI misuse can be in the form of using AI technology aiming to harm, such as scams, assault, discrimination, or privacy infringement. The victims of AI misuse often felt powerless and had insufficient legal

protection. Therefore, the need for juridical analysis of legal protection for the victims of AI misuse became necessary. Indonesia, as one of the countries that has great users of the internet in the world, cannot neglect this issue. Although Indonesia has some regulations and policies for AI, legal protection for the victims of AI misuse still becomes a challenge. The existing law did not fully cover the aspects of AI misuse, such as data privacy issues, algorithm discrimination, and other social impacts.

In Indonesia, the use of artificial intelligence has significantly increased in every second. One of them is the use of the chatbot anti-hoax developed by PT Prosa Solusi Smart which was launched by the Ministry of Communication and Information Technology of the Republic of Indonesia. The chatbot aimed to prevent the spread of hoaxes in society. Besides, the platform to recognize a face has been created and developed by Nodeflux. The real case of deepfake porn technology misuse happened on Twitter with the user of @xyeolpie. In her tweets, she complained and commented that she had become one of the victims of AI misuse, using deepfake porn. The case initially happened when the victim used one of the telegram features that enabled anonymous identity. The platform is usually used to communicate with unknown people. The chatting went on until the victim was asked to send a picture of knowing each other personally as an excuse. After the victim sent the picture, she got a threat saying that the picture had been edited in a porn video using AI technology.

However, it should be noted that the existence of various artificial intelligences did not guarantee free from errors. AI often causes a fatal consequence for an individual due to inappropriate outcomes. For example, when artificial intelligence is used for reviewing an agreement, an error could happen in interpreting and writing the clause and affect the agreement process. Moreover, inaccurate competence in detecting AI could produce an error. For example, face detection technology could make a mistake in claiming accuracy even though the objects being compared were different so that the data being gathered could be used by unauthorized people.

Unfortunately, the legal framework in Indonesia did not have a special regulation that regulates rights and legal protection for individuals that was harmed financially by the error of the artificial intelligence system. Besides, the challenges and obstacles in implementing legal protection for the victims of AI misuse in Indonesia have become an attention. Some of the vital challenges were the lack of general understanding of AI, expert specialists in AI, and the gaps between the technology development and the law. Furthermore, the other obstacle was the lack of an international legal framework that regulates the use of AI. Therefore, this journal aimed to analyze juridically the legal protection for the victims of AI misuse based on Indonesia's law. The analysis could give a better understanding of this current issue and provide a suggestion for improving the legal protection for the victims of AI misuse in Indonesia.

II. LITERATURE REVIEW

A. The Use of Artificial Intelligence

Artificial Intelligence (AI) is a general term to describe the use of computers to stimulate intelligent behavior with the involvement of minimum human intelligence. This term also refers to a machine's ability to finish tasks that are usually done by human intelligence. AI is a basic and broad field in computer science that involves replicated cognitive functions to solve a problem and develop a system for learning and reasoning similar to humans. The system has been significantly integrated into various industries to improve performance, accuracy, efficiency, and cost-effectiveness. Created by John McCarthy, AI is an experimental sector of computer science focusing on the creation of an intelligence machine that could handle various tasks using intelligence. This development has made people argue that the community is reaching the fourth industrial revolution because technology blurs the border between the real world, digital, and biology.[3]

Generally, artificial intelligence can be differentiated into three kinds:

1. Symbol-Manipulating AI. This artificial intelligence works with abstract symbols in which humans are reconstructed on the hierarchy level and logic. The information that is received from the above, is then processed into readable symbols for humans, the connection is abstract and the conclusion is logical.
2. Neural AI. Neural explains that knowledge is not represented through symbols but through the artificial neuron and its connectivity.
3. Neural Networks. Neural Networks are controlled through inter-connected layers over simulation. The top layer is the input layer, functioning as a sensor. There are at least two systems (or more than 20 layers in a big system) layers structured hierarchically. Those layers send and classify the information through the connection. There are some examples of AI usage such as "Siri" in Apple devices or "Google Assistant" in Android devices. Another example can be seen in calculator features or number processing on Microsoft Excel. Besides, artificial intelligence is also used for protecting private data, like what DANA company has shown, a digital wallet in Indonesia that runs a digital transaction. DANA uses a digital security system with special risk machine/scam detection supported by artificial intelligence to protect their customers' privacy data.[4]

B. The Urgency of Regulating Artificial Intelligence

The technology of artificial intelligence has brought many advantages from social, and medical advancement, to the reduction of climate change impact. Take an example of AI technology developed by a business company called DeepMind which is operated in England can predict almost all protein structures in science. This creates a potential to advance scientific research faster and better. Considering the case, the researcher can develop their skills to make a medicine that saves lives. With this development, researchers have advanced well in fighting against malaria, developing antibiotics, and reducing plastic waste. [5] Artificial intelligence could also be used to reduce climate change by increasing energy efficiency or reducing gas emissions from the farming sector, industry, and transportation. Artificial intelligence also has a vital role in immune the human body against climate change by giving information about extreme weather forecasts and providing supporting features to help decide how should people respond to them effectively.[6] Although AI has been discussed for its benefits and poten⁹ to help humans, the outcomes have started to be revealed. This could be seen from the latest news by Elon Musk, CEO of Tesla, and Steve Wozniak, Founder of Apple, who have signed a public petition with more than 2.600 leaders and well-known technology researchers. The petition was asking for a termination of AI development for a while. The petition contained a worrying statement stating that the human-like intelligence of AI could create a disaster for the community.

The introduction of AI could threaten the community. It is believed that AI could make mistakes, aside from its effort to improve or take the role in human decisions for eliminating some error decisions. Besides, the way how AI makes mistakes is different from the way humans make and it threatens the community. It requires clear and concrete evidence that AI can make lives better because the community wants to know the risks that can appear in implementing AI in their life. So, it needs a clear rule to regulate AI. [7] A good regulation can comfort the community and give them trust that humans still have control over AI. It is necessary to make policy for AI but it is also important to know what AI can and what they do not. Without clear regulations, the development and implementation of AI as a solution could not improve well, or even without the improvement in security and regulate by the latest laws. The up-to-date law, such as GDPR (The General Data Protection Regulation), can help to reduce the risk created by AI, like deepfake. Another effect of AI would likely appear along with the development of technology and the users in society. [8] At certain points, it could be clear whether special regulations are needed and do the regulations cover and focus on the objectives or not. Furthermore, it is also important to make sure that the AI creators and the users can obey the rules and will not stop them from improving a beneficial technology. Law and regulations generally allow free innovations, but the person in charge should take the responsibility and consequences if their innovations cause damage. [9] Based on some laws around the world that correlate with the act of AI misuse, such as the European Artificial Intelligence Act, were the initial regulation in the world that studies specifically AI, and according to the researcher's view, there should be more similar regulations to regulate the use of AI along with the responsibility for the AI misuse, particularly in the context of sexual and person dignity. A law reform could be also done for the existing regulation, in this case, UU ITE. Law reform could be done by inserting one article about the use of AI in detail as well as the attempt of legal protection for the victims. European Union instructed to make a transparency about the use of AI and there were some requirements about the transparency. This is one of the attempts that could be adopted and implemented for Indonesia's regulations.

III. METHOD

¹³ This research applied normative legal research methods and analyzed the regulations and principles of justice related to artificial intelligence in the integrated court system in Indonesia. This law research used literature reviews to collect legal resources. The methods included reviewing law, doctrine, journals, past reports, and other documents that were relevant to this research discussion, and this research aimed to show the regulations changes and give a meaningful perspective on how to improve legal protection for the victims of AI misuse. The collected documents were selected based on the research objectives and focus. To answer the problem which was protecting the victims from AI misuse, the ³ materials were used to analyze the theories related to the regulation's problems. The approaches used in this study were the legal approach, comparative approach, and conceptual approach.

IV. RESULT AND DISCUSSION

A. Indonesia's Legal Protection for the Victims of AI Misuse

Artificial Intelligence manifests various forms that are more advanced in helping the human workforce. The complexity of Artificial Intelligence also brings errors that can risk and harm other people. The error took the form of a wrong outcome, such as inaccurate agreement interpretation by AI. However, it could also make errors in the detection, such as inaccuracy in the face recognition technology. Currently, there is no specific law that rules the use of AI, so the charge for consequences caused by AI should be based on the existing law. AI was considered under the authority and supervision of a legal agency. Artificial intelligence, as a digital program that cannot be sensed or seen by humans, is classified as a virtual object, meaning that it fulfills the criteria of legal standing which has economic value, can be owned, and has no physical form. However, it should be noted that the characterization is only for the real and pure Artificial Intelligence that was never integrated into machine or hardware. If artificial intelligence is applied to hardware, such as a robot with an AI system, it belongs to a non-virtual/real object. In terms of error and damage caused by AI, the consequences and charges belong to the person who owns and controls it. Owning an artificial intelligence could be done by creating and transferring, with the delivery as the common method to get legal ownership. [10]

Indonesia, as well as other countries, is trying to adapt to the new challenges caused by the development of AI technology. Although there is no special law to regulate AI, there are some policies and regulations that can be applied to protect the victims of AI misuse.

1. Law of Electronic Information and Transactions (UU ITE) Number 1/2024: UU ITE is the core law that regulates the use of digital technology in Indonesia. Even though the law did not mention specifically AI, UU ITE can be used to protect the victims of AI misuse, particularly for online fraud, defamation, and privacy infringement.
2. Law of Personal Data Protection Number 27/2022: Although it is still in the process, the law of personal data protection is expected to give further protection to data misuse by AI systems.
3. Copyrights Law number 28/2014: In the context of AI that produces art or designs, Copyrights Law can be used to protect the owner's copyrights.
4. Ministry of Informatics and Communication Regulations number 20, the year 2016 concerning Personal Data Protection in Electronic Systems: This regulation gives a framework for personal data protection and can be used to regulate data misuse by AI.
5. Law of Witness and Victim Protection Number 31/2014: This regulation gives protection to the witness and victim in every process of criminal court
6. Criminal Code (KUHP): In the case of AI misuse that harms people's property and non-property, some articles in KUHP can be used to sue for compensation.

It is important to note that the problem caused by AI needs comprehensive and multidiscipline approaches. Therefore, there should be good cooperation among the government, industry, scholars, and civil society in formulating and applying effective and fair laws or regulations based on the EU AI Act as the first law for artificial intelligence in the world that had been approved by the European Union in February 2024.

B. Challenges and Obstacles in Implementing Legal Protection for the Victims of Artificial Intelligence Misuse.

Challenges and obstacles in implementing legal protection for the victims of artificial intelligence misuse were various and complex. The challenges and obstacles are below.

1. The lack of AI understanding: Many people including policymakers and law enforcers have not understood fully AI technology and how it works. This can be an obstacle in implementing and making an effective regulation.
2. Responsibility: Deciding who is in charge of AI misuse can be a challenge. For example, if AI did something wrong, would the programmers, users, or the AI itself be responsible for it?
3. Privacy and human rights: AI often requires personal data to completely run. However, it could cause a problem in revealing privacy and infringing human rights. How to protect the rights while still making sure that AI works well?
4. Gap in regulations: Law and regulation are often not up-to-date for the advancement of technology. This means that there will be a gap in the law where AI can be misused with no clear and latest rules to protect the victims.
5. Global standard: AI is a global technology, but the regulation is made and applied on a scale of national. Creating and enforcing global standards of legal protection for AI misuse can be a challenge.

6. Bias and discrimination: AI can promote bias and discrimination in society if it is not designed and used carefully. How to prevent this while AI still can operate effectively?

To solve the challenges and obstacles, it required comprehensive approaches that involved various stakeholders, including policymakers, AI researchers, human rights organizations, and public society.

V. CONCLUSION

It has already been indicated that Indonesia law's accepts the importance of protecting victims from technology misuse including AI. Among the laws that endeavor to protect the community from technology misuse are the Law of Electronic Information and Transactions (UU ITE). However, UU ITE has not fully covered the aspects of AI misuse. In this regard, some challenges and obstacles of law protection for the victims of the AI misuse in the country exist. It was being seen that in general, there was a lack of understanding of what AI is and where it leads. Special laws associated with AI that can understand the steps of AI and deal with the criminal cases of AI. There were gaps between the technological development and legal development, where the law became outdated from technological development. Therefore, Indonesia had to develop specific regulations pertaining to AI in order to overcome the challenges and barriers. Moreover, the aspects of data privacy, algorithm discrimination, and other social impacts due to AI misuse are issues that the regulations should tackle. Another important matter included in the regulations is the clarification of the rights and obligations of users and developers, including the mechanism to settle the disputes related to the misuse of AI. The EU AI Act can be a reference that has been already approved for it to be an artificial intelligence law in the world. It has established the legal protection under the law of Indonesia to protect the victims from AI misuse. However, there was certain process implementation that went through challenges and hurdles. First, not knowing or understanding specific regulations and AI within communities, and second, not being able to make the right decision about who was in charge of the misuse of AI. Another challenge was the collection of evidence coupled with decision-making on the quantum of damage done by the AI.

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