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LAW & SOCIAL POLICY | RESEARCH ARTICLE

Legal Challenges in Overcoming Changes in Social Behaviour Due to the Development of Technology and Information

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Abstract: The development of technology and information that is spread globally, especially in Indonesia, has a significant impact on changes in social behavior in people's lives. Technological developments not only affect behavioural changes but also affect the way of interacting, acting and communicating. Although it provides convenience for society and has a positive side that can help humans in all matters and fields, technology and information also pose serious legal challenges related to changes in social behaviour that occur in society, such as violations of privacy, freedom of speech and the spread of fake news. The research method used in this article is descriptive qualitative, literature study and reflection method. Data were collected through literature studies, articles, and legislation related to information technology. Therefore, this article aims to identify legal challenges that arise due to the development of information technology that causes changes in individual behaviour. So as to overcome these challenges, improvements and adjustments to laws relevant to the current technological era are needed such as the protection of privacy rights or personal data must be strengthened through strict regulations, law enforcement related to fake news needs to be improved and moral decline must also be addressed. The association between the government and legal bodies must work together to overcome the challenges that occur and maintain a balance between technological progress, legal protection and law enforcement. It is hoped that this article will provide a better understanding of the legal challenges faced due to the growing flow of technology, and provide awareness to each individual to understand in depth the negative impact of information technology.

Keywords: Law; Information; Change; Challenges; Technology;

1. INTRODUCTION

Technology serves as a means to produce the necessary devices to improve the ease and efficiency of human life. The word "technology" comes from the word "technologies" or "techno" which describes skills and knowledge. Basically, technology can be interpreted as skills or aspects related to knowledge. The definition of technology is not limited to objects that have a physical form, such as equipment or machinery (Taufik et al., 2019). Technology is a form of progress that develops from time to time accompanied by advances in information and communication.

Globalisation is an integral part of the development of Science and Technology (Science and Technology), known as the main element in the era of the Industrial Revolution 4.0. In this era, there is rapid technological advancement, creating a modern and sophisticated society. Current technological developments, including Artificial Intelligence (AI), robots, computers, smartphones, and others, are the result of developments from the industrial revolution in England in the 18th century (1760-1830) (Sukana, 2024).

The development of technology brings advances in information. Etymologically, the word "information" comes from the French "information" which means concept or idea. Information is an activity in communicated knowledge, in the form of a set of data that is processed into something useful. Usually, information is processed to be easily understood by the recipient, into a form that is valuable or meaningful (Nuh, 2022). Information is very useful for humans because it can increase knowledge and help humans in their lives. Information in the current era will be easily obtained through rapidly developing technology such as through smartphones used by humans in their daily lives.

However, the presence of technology and information that is increasingly diverse, advanced, and innovative can be likened to a double-edged sword, which means that progress can have a positive impact and can also have a negative impact (Tranggono et al., 2023). It is undeniable that technology

has a positive impact, but behind that, technology also has a negative impact on humans, for example, such as changes in life. Change according to KBBI is derived from the word change which means to be different or different from the original, (Gitelman, 2014) changes that occur in society not only include conditions but also include changes in the mindset and behaviour of the community, for example giving rise to evil ideas of social pathology.

Gadgets or smartphones are popular technology and are in demand by the world community, including the Indonesian people, especially the millennial generation and gen Z who play an active role in using this technology. Indonesia is one of the countries that uses the most smartphone technology, this is evidenced by the data listed from each year. In 2020, the number of smartphone usage reached 62.84%. (Sadya, 2022). Furthermore, in 2021 the Central Bureau of Statistics noted that in Indonesia the use of smartphones increased to 65.87% (Sadya, 2022), in 2022 it increased again to 67.88% (Irwansyah et al., 2019) and now in 2023 the highest peak reached 77% (Annur, 2023). According to Nielsen, the average Indonesian uses a smartphone for 3 hours and 15 minutes per day (Haryati & Haryanto, 2023) and according to data.ai's "State of Mobile 2023" report, by 2023 the time spent by Indonesians using mobile phones increased to an average of 5.7 hours per day. This means that from year-to-year smartphone users in Indonesia are getting bigger and the period of use is also increasing.

With the presence of smart phone technology, information communication media is also growing, which also has an impact on people's behaviour, especially for the younger generation. UNICEF Country Representative of Indonesia, Angela Kearney explained that young people are always interested in learning new things without realising the risks they pose (Tranggono et al., 2023). As a result of technological developments in the form of smart phones, it can affect interpersonal communication because individuals tend to communicate through social media networks such as WhatsApp, Instagram, Facebook and other social media networks so that they tend to ignore face-to-face communication.

From these various statements, it can be seen that in the use of technology there are challenges that must be faced, especially since Indonesia is listed as the country that uses the smartest phones. One of them is that interpersonal communication can decrease due to the use of these technologies and there is an erosion of the 5S culture which is indirectly the beginning of moral degradation. But of course, the various challenges faced are a difficult thing to live with, therefore there must be something that can regulate for the creation of an ideal community life, namely the law that plays a role in regulating life. As the definition of law itself according to E. Utrecht: law is a set of living instructions containing orders or prohibitions that regulate order in the life of the community that must be obeyed by members of the community and if violated can cause action from the government of the community (Elsa Nurahma Lubis & Dwi Fahmi, 2021). Therefore, the law plays a role in facing challenges in overcoming problems and all changes that occur in society so that the use of technology and information in social life is in line with the rules so that there is no abuse and is useful for the community to advance the nation as in Law Number 11 of 2019 Article 6 Paragraph (1).

Based on the problems that occur in Indonesian society, it can be seen that technological progress has two sides, and its urgency lies in the imbalance between applicable laws and new forms of social behaviour and the importance of public awareness of the law to minimise the adverse effects of information technology. The form of technological progress requires the community to follow the social changes that occur and the community must make these changes into something positive.

Therefore, this article is compiled with the aim of analysing and suggesting solutions to overcome the problems that occur as a result of the problem of the negative impact of technological renewal which is expected to form a wise character and be sceptical in accepting technological and information advances, technological literacy must be based on applicable rules. Because technology aims to facilitate the community in carrying out various activities in various aspects, and not as a means to commit crimes because technology should be used optimally and not misused for personal gain or other things that can harm others and yourself.

2. Literature Review

This literature review of the title "Legal Challenges in Addressing Changes in Social Behaviors Due to the Development of Technology and Information" can cover or contain an understanding of how technology impacts social behavior within the scope of society. This literature review, involves research where law plays a role in the world of technology such as those related to privacy, data security, and technology regulation to explain legal barriers in responding to changes in social behaviour. The literature analysis can also highlight the legal efforts that have been taken to mitigate such negative impacts, providing a comprehensive picture of the legal challenges in the era of technological and information development.

3. Research Method and Materials

The research methods used in this article include qualitative methods, literature review, and reflection methods. Qualitative methods are used to describe data and facts descriptively and in detail related to the identification of problems that occur. The subjects in this research are Indonesian people, especially millennials and generation Z, who always play an active role in using the technological advances that occur in this era. Qualitative methods allow researchers to gain a deep understanding of the experiences, attitudes, and behaviours of research subjects. Thus, qualitative methods are important to explore the perceptions, motivations, and attitudes that underlie individuals' relationships with technology.

In addition, this research also uses the literature review method. A literature review is used to collect references and use literature sources from various journals or other media that contain issues related to the development of technology and problematic information. The literature review allows researchers to gain a broad understanding of the theoretical context and previous research findings related to the topic under study. This allowed the researcher to enrich their understanding of the issue under study and to place their research in a broader context.

Lastly, this research also involved the reflection method. The reflection method is based on the author's experience, knowledge, and analysis of the identification contained in the article. By using the reflection method, the author can present various discussions on the issues based on the knowledge that has been acquired by the author. The reflection method allows the authors to relate the research findings to their personal experiences, consider the practical implications of the findings, and reflect on the ethical and moral implications of the research results.

Overall, the combination of qualitative methods, literature review, and reflection provides a comprehensive approach to exploring issues related to technology use among Indonesians, particularly millennials and Z generations. By using this approach, this research can provide deep insights into the complex dynamics that occur in the interaction between individuals and technology in today's digital era.

4. Results and Discussion

Legal Challenges in Addressing Changes in Social Behaviour

Globalisation has entered a new phase called the Industrial Revolution 4.0. According to Klaus Schwab in *The Fourth Industrial Revolution* (2016), the world has experienced four periods of revolution. First, the Industrial Revolution 1.0 occurred in the 18th century through the invention of the steam engine, which enabled the mass production of goods. Second, the Industrial Revolution 2.0 came in the 19th-20th centuries with the utilisation of electricity, which reduced production costs. Thirdly, Industrial Revolution 3.0 emerged around the 1970s with computerisation. Finally, the Industrial Revolution 4.0 itself began around the 2010s through the use of engineering intelligence and the internet of things as the backbone of interaction and connectivity between humans and machines (Prasetyo & Trisyanti, 2018).

Sociologically, the Industrial Revolution 4.0 fundamentally changes the way humans think, live, and relate to one another. This era will disrupt various human activities in various fields, such as in the economic, social, political and especially in the field of technology and information which brings major changes in social life (Kennedy & Suhendarto, 2020). Sociologically, the advent of the Industrial Revolution 4.0 marks a profound shift in the fabric of human existence, altering not only the ways in which individuals engage with technology but also reshaping the very essence of social structures and relationships. This transformative epoch heralds a disruption across multiple spheres of human activity, spanning the realms of economics, society, politics, and technology, with particularly significant ramifications for the latter. As Klaus Schwab delineates in his seminal work, *"The Fourth Industrial Revolution"* (2016), this era represents the culmination of a series of evolutionary leaps in human civilization, each engendering distinctive changes in the trajectory of societal progress (Suhendar, 2021).

At its core, the Industrial Revolution 4.0 signifies a paradigmatic shift in the manner in which individuals conceive of and interact with technology. Unlike its predecessors, which were characterized by linear progressions in mechanization, electrification, and computerization, the current phase is distinguished by the pervasive integration of engineering intelligence and the ubiquitous connectivity facilitated by the Internet of Things (IoT). This confluence of advanced technologies transcends mere automation, imbuing machines with unprecedented levels of autonomy, adaptability, and cognitive capabilities. Consequently, human-machine interactions are no longer

confined to rigid frameworks of command and execution but instead encompass dynamic exchanges predicated on mutual learning and collaboration.

Moreover, the reverberations of the Fourth Industrial Revolution extend far beyond the confines of technological innovation, permeating the very fabric of social life. Within the economic domain, traditional modes of production, distribution, and consumption are undergoing a seismic upheaval, as digitalization and automation render erstwhile practices obsolete while engendering novel opportunities for value creation and entrepreneurship. The emergence of platform economies and the gig economy exemplify the proliferation of non-traditional employment models, catalysed by the proliferation of digital platforms and the disaggregation of labour.

In tandem with these economic transformations, the social landscape is undergoing a profound reconfiguration, as established norms and conventions are subjected to scrutiny and revision. The advent of social media and digital communication platforms has catalysed the emergence of virtual communities, transcended geographical boundaries and engendered novel forms of social interaction and collective identity formation. However, this proliferation of virtual spaces also engenders new challenges pertaining to privacy, authenticity, and the erosion of traditional social bonds. Politically, the Fourth Industrial Revolution engenders both opportunities and challenges, as the democratization of information and the empowerment of individuals foster unprecedented levels of civic engagement and political activism. However, this proliferation of digital discourse also underscores the perils of echo chambers and algorithmic bias, exacerbating societal polarization and undermining the integrity of democratic processes.

In conclusion, the advent of the Industrial Revolution 4.0 heralds a watershed moment in human history, characterized by the convergence of advanced technologies and the recalibration of social structures and relationships. As society navigates the tumultuous terrain of technological disruption, it is imperative to adopt a proactive stance, fostering inclusive innovation and equitable access to the benefits of digitalization. Only through concerted efforts to harness the transformative potential of the Fourth Industrial Revolution can society navigate the complexities of the digital age and forge a path towards a more prosperous, sustainable future. Information and communication technology has developed and evolved since long ago which brings progress to mankind so that now it is not limited to space, time and territory. One of the factors in the development of technology and information is none other than the invention of the telephone by Alexander Graham Bell which is now developing into today's very sophisticated information technology, namely smartphones, the invention of computers by a British mathematician, Charles's Babbage (Tahmid Noor Rahman et al., 2024) and the invention of the laptop by Adam Osborne (Andrei, 2023).

The development of this technology will not be separated from the development of information and communication, the more advanced the world, the more advanced the development of technology that occurs. Technology began to develop rapidly in the 1990-2000s, especially digital technology, and in the same year there was also a widespread development of the internet in people's lives, where social networks such as Facebook began to be in demand by the world community including the Indonesian people.

In ancient times, technology such as mobile phones which are now referred to as smart phones were mostly used by the bourgeoisie, and were used in big cities only while in remote areas and small towns they were not widespread and not used. But nowadays it is very common if the technology can be accessed by all circles and has spread to all corners, and the use of technology in the 4.0 era has spread far and the features contained in it are increasingly diverse such as smart phones based on the android operating system, windows mobile to iOS are all connected or connected to the internet (Kristiyono, 2015).

Various circles of the world community, especially Indonesia, now have at least one smartphone to help and facilitate humans in carrying out their daily activities. Starting from children, teenagers, and adults, it can be said that they are very good at using smart phone technology, so that almost all people use the internet and social networks to communicate and share information through available networks or platforms. These activities today are already familiar, where social communities interact online without having to meet face to face, which is called "communication always on your hand." which means that communication is always in hand using the smart phone because with the presence of technological sophistication, people can communicate anywhere and anytime. In the modern era, cyberspace has transformed into a public sphere as expressed by Habermas. The internet has become a public discussion platform that is open to all individuals without any restrictions that contain discussions on various topics. In addition, cyberspace has changed human behaviour from the real world. Emails, weblog's, chats, webcams, and platforms such as Facebook and Twitter, along with the emergence of e-learning, e-commerce, and e-banking, have become new means for activities that previously could only be done physically or in person.

The presence of technology is always a hot topic of conversation, the presence of information technology can be considered a friend and enemy for mankind. Technology has a positive side that can be felt by its users, such as:

a. Efficiency in communication

The advent of information technology has revolutionized the communication landscape, facilitating instantaneous interactions that transcend geographical boundaries. In the contemporary digital age, individuals have unfettered access to an array of social media platforms, enabling them to engage in real-time communication irrespective of their geographic location. Platforms such as Snapchat, Instagram, and Facebook serve as conduits for global connectivity, fostering interactions among individuals hailing from diverse corners of the globe. Consequently, the traditional constraints of time and space have been rendered obsolete, as individuals can seamlessly communicate and exchange ideas with counterparts located thousands of miles away (Mahanani, 2023).

This proliferation of digital communication platforms engenders a myriad of opportunities for interpersonal connection and collaboration on a global scale. Through platforms such as Snapchat, individuals can share ephemeral moments of their lives with friends and acquaintances across continents, fostering a sense of intimacy and immediacy that transcends physical distance. Similarly, Instagram provides a visual medium through which individuals can curate and share snapshots of their lives, forging virtual connections with like-minded individuals from disparate cultural backgrounds. Meanwhile, Facebook serves as a virtual agora, facilitating the exchange of ideas and perspectives among individuals with diverse ideological inclinations. In essence, the ubiquity of social media platforms has democratized the communication process, empowering individuals to forge meaningful connections and engage in cross-cultural dialogue on an unprecedented scale.

b. Ease of accessing information

Information will be very easy to get by just searching through available features such as Google, AI and bots. These features will provide detailed and complete information about things or things needed by humans. Accessing information has become remarkably facile in the contemporary digital landscape, facilitated by an array of sophisticated features including Google search, artificial intelligence (AI), and chatbots. These technological tools serve as invaluable resources, enabling individuals to swiftly retrieve detailed and comprehensive information pertaining to a myriad of topics or necessities. Through the utilization of search engines such as Google, users can effortlessly navigate the vast expanse of the internet, accessing a treasure trove of knowledge encompassing diverse domains ranging from scientific inquiries to practical guidance. The seamless integration of AI algorithms further augments this process, as machine learning algorithms analyze user queries and retrieve relevant information with unparalleled accuracy and efficiency (Belani, 2023).

Moreover, the advent of chatbots has revolutionized the process of information retrieval, offering users personalized assistance and guidance in real-time. These AI-powered virtual assistants leverage natural language processing capabilities to engage in conversational interactions with users, elucidating queries and providing tailored responses to individual needs. Whether seeking advice on a complex technical issue or inquiring about local amenities, chatbots serve as invaluable allies, streamlining the process of information acquisition and enhancing user experience. In essence, the convergence of advanced technologies has democratized access to information, empowering individuals to navigate the intricacies of the digital age with unprecedented ease and efficiency.

c. Renewal of the learning process

Before the development of information technology, learning activities and materials only came from books and printed media such as newspapers because the internet feature had not been invented and was not popular in its day. Now, the learning process can be done online from home by using various learning applications such as classroom, google meet, zoom, quiz, kahoot and other applications. In addition, various learning materials have been updated digitally such as e-books and materials found on websites. Before the advent of information technology, learning was predominantly reliant on traditional printed materials such as books and newspapers, as the internet had yet to be developed and was not widely accessible. During this era, individuals seeking knowledge typically turned to physical libraries or educational institutions for access to learning resources. The dissemination of information was primarily confined to the printed page, limiting the scope and accessibility of educational materials for many individuals. Consequently, the learning process was often constrained by geographical and logistical barriers, as individuals were required to physically access educational facilities or procure printed materials to engage in formal or informal learning activities.

However, the advent of information technology has revolutionized the landscape of education, democratizing access to learning resources and transcending the constraints of traditional educational paradigms. In the contemporary digital age, learning can be seamlessly facilitated online from the comfort of one's home, thanks to a plethora of innovative learning applications and platforms. Tools such as Google Classroom, Zoom, and Kahoot have emerged as indispensable assets, enabling

educators to conduct virtual classrooms and interactive learning sessions with students located across the globe. Similarly, platforms like Google Meet and Zoom have facilitated synchronous communication and collaboration among students and instructors, fostering dynamic learning environments that transcend the confines of physical classrooms.

Moreover, the digitization of learning materials has further augmented the accessibility and efficacy of the learning process. Through the proliferation of e-books and online resources, individuals have access to a wealth of educational materials spanning diverse disciplines and subjects. Websites hosting digital learning materials offer a repository of curated content, ranging from instructional videos to interactive tutorials, catering to learners of all ages and proficiency levels. This digital transformation of educational resources not only enhances the flexibility and convenience of learning but also fosters a culture of lifelong learning by enabling individuals to engage with educational content at their own pace and convenience. In essence, the advent of information technology has democratized access to education, empowering individuals to embark on a journey of continuous learning and personal growth regardless of geographical constraints or institutional affiliations (Muttaqien et al., 2023).

d. Efficiency of economic commercial activities

Digital-based economic activities will make it easier for humans to fulfil their needs. This activity is considered more effective and saves time. For example, online transactions, online shopping and others. Digital-based economic activities have streamlined the process of fulfilling human needs, offering increased efficiency and time savings. Online transactions and shopping exemplify this trend, providing individuals with convenient avenues to procure goods and services without the constraints of physical presence. Through e-commerce platforms, consumers can browse an extensive array of products, compare prices, and make purchases with just a few clicks, eliminating the need for conventional brick-and-mortar shopping experiences. This paradigm shift towards digital commerce not only enhances the convenience and accessibility of consumer transactions but also fosters greater market efficiency by facilitating seamless interactions between buyers and sellers (Harto et al., 2023). Moreover, the digitization of economic activities transcends mere transactional convenience, catalyzing broader transformations in consumer behavior and market dynamics. By leveraging digital platforms, businesses can optimize their operations, target niche markets, and personalize consumer experiences, thereby enhancing competitiveness and driving innovation. Furthermore, the proliferation of digital payment systems and fintech solutions has democratized access to financial services, empowering individuals and businesses to participate more actively in the global economy. In essence, digital-based economic activities represent a transformative force that not only simplifies the fulfillment of human needs but also engenders broader socioeconomic benefits by fostering greater efficiency, inclusivity, and innovation within the marketplace.

e. Means to develop hobbies

After the digital era came, many people have hobbies related to technology and information, for example editing, digital images, and making educational content videos that can provide knowledge to the general public. Of course, these hobbies provide benefits for the community such as a source of income and can improve their skills.

Changes in people's behaviour due to technological developments in positive terms can advance the life of the nation, but the ease of using information technology is often the material for people to abuse it. The problem that occurs when this technology develops is the mindset of humans who use technology unwisely so that it can harm others and even themselves. Unwise use of technology makes technology a threat to social life, because it can be used as an act of social deviation, social crime, and threats that can be against the law. Especially in Indonesia itself, the high use of smartphones causes considerable problems so that this development causes a lot of mens rea or malicious intent carried out remotely through information technology tools such as smartphones and computers.

In the midst of the rapid development of information technology and society is facing significant changes in social behaviour. The legal challenges that arise in overcoming the various impacts of these changes are becoming increasingly complex along with the development of information technology flows. The law must face the fact that in the age of 4.0 crimes are not only physical.

Therefore, in accordance with Article 1 paragraph (3) of the 1945 Constitution of the Republic of Indonesia, which explains that "Indonesia is a state of law", everything must be regulated by law, including matters relating to information technology. The first thing that becomes one of the main challenges is privacy. The ever-increasing flow of information through digital platforms increases the risk of individual privacy breaches. The law must carefully assess and protect the privacy rights of its citizens, especially personal data that is often illegally traded or exploited. The law must ensure the security of citizens and always apply the concept of the rule of law in order to create citizen comfort regarding personal matters.

For example, cybercrime is the dark side of technological advancement. Cybercrime is a term for crimes that attack computer systems or internet networks, with the aim of data theft, finance and the

spread of malicious software code which is an illegal act in the field of information and communication technology as a modified form of conventional crime (Riskiyadi et al., 2021). Cybercrime is an action taken by perpetrators to destroy an organisation's network by stealing valuable data, documents, hacking into bank accounts and transferring to their accounts (Riskiyadi et al., 2021). To study these criminal acts, cybercriminology is needed, which is a combination of knowledge from criminology, psychology, sociology, computer science, and cybersecurity to provide an in-depth understanding of cybercrime. Cybercrime is increasingly accelerating as stated in the 2021 Cybersecurity Monitoring Annual Report issued by the State Crypto and Cyber Agency, the number of suspicious attempts to infect cybersecurity systems or internet traffic anomalies in Indonesia is more than 1.6 billion. The number of internet traffic anomalies has tripled compared to 2020 (Mediana, 2022). Then the Governor of the National Resilience Institute (Lemhanas) Andi Widjajanto said that Indonesia experienced 2,200 anomalous cyber-attacks every one minute in 2023 (Ulya, Fika Nurul & Meiliana, 2023).

Cyber anomalies are situations where something abnormal occurs on a computer or network. Cyber anomalies are suspicious activities and indicate a potential threat to privacy. The way anomalies work is by monitoring all computer network activity through systems and software (Araya & Rifâ-Pous, 2023). This shows that there are still many people who violate the rule of law and do not obey legal regulations, which makes the role of the law itself decrease. Whereas digital crimes have been regulated in Article 30 paragraphs (1), (2) and (3) of Law Number 11 of 2008 concerning Electronic Information and Transactions (ITE), which reads: (1) Every person intentionally and without right or unlawfully accesses another person's Computer and/or Electronic System by any means. (2) Every person intentionally and without right or unlawfully accesses a computer and/or Electronic System by any means for the purpose of obtaining Electronic Information and/or Electronic Documents. And, (3) Any person intentionally and without rights or unlawfully accessing a computer and/or Electronic System by any means by violating, breaking through, exceeding, or breaching a security system. In addition, cases of cybercrime also include hacking, carding, ransomware attacks, skimming and what is currently rife in the community is phishing (Riskiyadi et al., 2021).

Phishing is an unlawful act by air (online) that seeks to find out sensitive data such as passwords, account numbers and personal data by falsifying identities to trick victims. Such cases that have occurred recently are the mode of digital invitation letter fraud in the form of applications sent via the WhatsApp platform. The invitation contains a virus or malware that can seize personal data by running a back screen so that the screen can record user activity clearly (Putri & Wijayanto, 2022). As a result, the data is spread and conveyed directly to the perpetrator who can benefit himself because starting from account passwords to notifications can be known easily if the application in the form of an invitation is connected by the perpetrator. So do not be surprised if in this case there are many losses such as material (money) that even lost tens of millions due to these actions. Phishing actions can also be carried out through telephone calls, the perpetrator will claim to be a relative who is in need of help but in the end the perpetrator asks for a sum of money to the victim with the alibi to provide assistance to him. In fact, this is clearly against Article 378 of the Criminal Code which reads "anyone who, with the intention of unlawfully benefiting himself or others, by using a false name or false dignity, by deception, or a series of lies, moves others to hand over something to him, or to give debts or write off receivables, shall be punished for fraud with a maximum imprisonment of four years". In this context, the case of special criminal acts of information technology becomes a serious problem because technological crime will get bigger if it is not immediately dealt with firmly.

Furthermore, the legal challenge is also to balance between freedom of speech through media and preventing all harmful content. Although, the platforms available in information technology basically provide freedom of expression, the challenge is that it can lead to disinformation, hate speech and fake news. This fake news can lead public opinion to create disintegration and chaos in absorbing information. This fake news will easily spread to various media because information technology is no longer conventional but has turned into modern and various social media platforms have played an important role in spreading fake news. Intentionally spreading fake news can be charged with Article 28 paragraph (1) of Law Number 19 Year 2016 on Information and Electronic Transactions (UU ITE) which states "Every person intentionally, and without the right to spread false and misleading news that results in consumer harm in Electronic Transactions".

As an example of a hoax or fake news case that occurred during the Cianjur earthquake in November 2022, there was a person who spread information that the earthquake that occurred in the Cianjur area was a volcanic earthquake originating from Mount Gede and Mount Pangrango. Obviously, this panicked the people of Cianjur who were evacuating at the time and caused an uproar in the community. The news quickly spread due to the ease of conveying information through various networks or platforms, but in fact the news was disinformation. As stated by Muhammad Wafid AN as the Head of the Geological Agency of the Ministry of Energy and Mineral Resources (ESDM) who said that based on the analysis of the Centre for Volcanology and Geological Disaster Mitigation

(PVMBG), the Cianjur earthquake was a tectonic earthquake and the volcanic status of Mount Gede and Mount Pangrango is still at level 1 or normal (Viska, 2022).

Another problem arising from the flow of information technology is the presence of Artificial Intelligence (AI), which is considered to threaten human existence. In Hangzhou-China, AI judges have been launched since 2017, although they are still limited to handling legal disputes that have digital aspects, including online buying and selling issues, copyright cases, and e-commerce product liability claims (Zaelani, 2023). Likewise, it is not impossible for the lawyer profession to be replaced by AI. As is well known, AI has beaten leading lawyers for the first time in a competition to understand legal contracts (Zaelani, 2023). Although AI is artificial intelligence, the system can make a new problem that arises in real life. This makes it imperative for the law to address restrictions and misuse of AI to optimise its use.

In addition, legal challenges must also face new changes in society that have become accustomed to shopping digitally. Of course, this is a problem that occurs in Indonesia because the presence of various online shopping applications can make traditional community companies less popular. For example, the closure of Tiktokshop which is a social media application but also contains e-commerce. With the existence of Tiktokshop, people have switched to shopping online because in addition to the prices offered being more affordable, various discounts also make the attractiveness of the community even greater and the goods available are more varied so that traditional markets are starting to be abandoned by the Indonesian people. As a result, the traders protested to the government to close the e-commerce feature in Tiktokshop. This shows that information technology can also cause social conflict in society which must be addressed with binding regulations to prevent further conflict. As stated in Law Number 31 of 2023 Article 21 paragraph (2) which contains "PPMSE with the Lokapasar (Marketplace) and / or Social-Commerce business model is prohibited from acting as a producer in accordance with the provisions of laws and regulations in the field of distribution of goods."

Although there is already a law that regulates technology (Electronic Information and Transaction Law), *ius constituendum* or aspired law is needed to ensure higher legal certainty so that it can be more effective and relevant to the progress of the times as well as technology, because technology is increasingly varied and human behaviour patterns also vary which will be institutionalised or legally become *ius constitutum* law.

Like the previous event, which started from a law that was aspired to be a written regulation or positive law in Indonesia, the establishment of a cyber law regime in Indonesia experienced a long history before the enactment of the Electronic Information and Transaction Law. The study of cyber law has been conducted since 1999 which was initially initiated by the cyberlaw study centre of the Faculty of Law, Padjadjaran University together with the Department of Electrical Technology and the Bandung Institute of Technology as well as the Directorate General of Post and Telecommunications. Based on long studies and debates, the three centres succeeded in producing an academic paper on the Draft Law on the utilisation of information technology. Then in 2000, the University of Indonesia, Faculty of Law, also coloured the historical flow of the birth of the cyber regime together with the department of industry and commerce and also drafted a cyber law in the form of an academic paper on the draft law on electronic information and electronic transactions (Ulya & Musyarri, 2020).

The need for cooperation from various parties starting from the community, law enforcement agencies and security institutions such as the police to ensure that the laws that have been institutionalised are effective to be applied and the applicable regulations are respected within the scope of society because the community is considered to have known the law if the law or regulation has been passed in accordance with the legal principle "*eidereen word getch de wette kennen*".

Another challenge in dealing with the development of information technology is the characteristics of the two generations in Indonesia, namely generation Y and Z. Indonesian society plays a very active role in the use of information technology, especially generations Y and Z. Generation Y is known as the millennial generation or millennials who were born around 1981-1994, while generation Z (Gen Z) is the generation born between 1995-2010 (Zeva et al., 2023). These two generations are the generations that dominate the use of technology in the modern era, both are very capable of operating technology and information activities, especially in using the internet. Based on data from the Ministry of Communication and Information in the survey report on the Status of Digital Literacy in Indonesia 2022, it notes the digital behaviour patterns of Indonesians including generations Y and Z, one of which is related to the duration of internet use. It is noted that the majority of generation Y respondents (26%) and generation Z (35%) use the internet for more than 6 hours per day (Ahdiat, 2023). The internet has become an addiction for generations Y and Z, they are very active in using information technology that is interesting for them to use because this generation has been accustomed to digital technology from an early age. Even generation Z is dubbed as "born with a chip" because of their proximity to technolog (Akbar et al., 2023). However, liberal

internet access is prone to misuse by both generations, for example pornography and online gambling sites.

In using social media, both generations have similarities, namely that they both tend to express themselves on social media so that they are greatly affected by the existence of information technology. In addition, in the social media algorithm there are various contents that can make it easier to change the behaviour of generations Y and Z, for example, such as provocation elements that make this generation unstable and do not have their own stance. The availability of social media platform facilities can generate new conflicts in generations Y and Z because in some cases there is hate speech using fake accounts, non-verbal bullying, as well as the ease of spreading fake news. However, the urgency is that social media is an interesting thing for generations, because the content of a social media platform includes all things modern and they are often unable to filter it so that they are unknowingly carried away by globalisation.

The various conveniences provided by information technology also provide a change in the characteristics of this generation. They tend to have instant thinking due to the availability of various features such as AI that help in working in the field of science making this generation also tend to be lazy and lack critical thinking which causes a decrease in the quality of literacy in this nation's generation because they use a copy system without reading first. According to the Programme for International Student Assessment (PISA) organised by the OECD, Indonesia was part of the 10 countries with low literacy levels in 2019, ranked 62 out of 70 countries (Winangi, 2021). Then based on data from the Central Statistics Agency (BSP) in 2023, it shows that Indonesia's population reached 278.69 million people, but such a large population is inversely proportional to the amount of interest in reading as reported by UNESCO data, only 0.001% of Indonesians have an interest in reading. That means, out of 1000 Indonesians, only 1 person likes and actively reads (Hanifa et al., 2024).

Online gaming is also an important factor in regulating the behavioural changes that occur in these two generations, because online gaming is not only a means for entertainment but also plays a role in social interaction indirectly in the digital world. As a result, they tend to lack the confidence to appear in public directly because they are more comfortable interacting in the digital world. This can also hinder their productivity and inability to focus on their daily activities. In fact, Generation Y and Z are the generations that will continue the progress of the nation, but with the presence of increasingly complex information technology, both generations have significant changes in behavioural patterns, ranging from patterns of thought, patterns of interaction and action (Lumowa & Suprianto, 2022). Therefore, to overcome this urgency is to optimise the role of law in such as, providing interesting legal education through digital platforms that are easily accessible to them on how to be wise in technology such as optimal time limits, content filtering, internet restrictions and so on so that generations Y and Z also include the Indonesian people to be imitated to run it.

In a problem, there are certainly factors that can influence the occurrence of a problem, the dependence of the cause of technology can come from within or internal and can come from outside the external. Between these two factors there is a correlation that integrates them.

Some of the reasons that are the causal factors of technology dependence are the ease of access and availability that makes people always feel the need to use technology. The second factor is the rapid and continuous development of technology that brings new innovations regularly. Dependence can arise because people feel the need to keep up with these developments so as not to be left behind. The next factor is convenience and efficiency, technology provides comfort for people because it can help their various activities so as to create efficiency. The fourth factor is social needs in communication, every individual cannot be separated from the grasp of their smartphone because technology provides communication channels and connectivity that are important in the social context. The fifth factor is that the integration of technology in education and the workplace has increased individuals' dependence on devices and applications for learning, work, and collaboration. Such dependence grows due to environmental demands in education and work that emphasise the use of technology as an integral part of processes and interactions because in the digital age almost all activities have been transferred using technology and information. The last factor is that in the business world, dependence on technology is often a necessity to improve operational efficiency, marketing, and product innovation. This dependence can be triggered by economic demands and market competition.

Due to the Development of Technology and Information

The consequences that occur when people cannot harmonise the use of technology such as cases that have occurred because they feel they are given freedom and ease in using information technology cause serious impacts.

a. Social interaction

Changes in communication patterns and social interactions can have an impact on relationships between individuals. The deterioration in the quality of direct social interaction, especially among younger generations who are more exposed to technology, poses a challenge in creating healthy social norms.

In social interaction, people now tend to communicate through social media platforms. If this continues to happen, it can make individuals experience social isolation. Social isolation is a condition when a person lacks social interaction or the opportunity to interact with others (Boleng et al., 2024). So that direct communication cannot be fulfilled because of the discomfort when meeting directly with other people. This can also lead to antisocial behaviour where individuals have withdrawn from their environment. However, on social media they remain active in communicating because interaction does not take place in person.

b. Information Technology Liberalism

Misuse of technology apart from committing crimes can also lead to deviations in social values. Internet freedom in the consumption of unlimited digital content makes various sites or websites accessible to anyone at any time. Even though the content of a web or site is not always good things, for example, the freedom to access pornography causes more concern because it can damage the mindset and behaviour patterns of each individual. The ease of accessing information can also make individuals lazy to think such as the availability of AI, Google, and other applications that make individuals have a short-term mindset (Badruzaman, 2019).

Freedom in accessing the internet, apart from perpetrating crimes, the misuse of technology can also result in the erosion of societal values. The unrestricted access to digital content on the internet enables individuals to visit various websites at any time, regardless of the quality or appropriateness of the content. This unrestricted freedom poses particular concerns regarding access to pornography, which has the potential to distort individual mindsets and behavior patterns. The pervasive availability of explicit content can contribute to the normalization of harmful attitudes towards sexuality and relationships, undermining the fabric of social norms and values. Furthermore, the ease of accessing information through technologies such as AI and Google can foster intellectual complacency and a short-term mindset among individuals. The instant gratification provided by these applications may discourage critical thinking and deep reflection, as individuals become accustomed to readily available answers without exerting effort in analytical or creative pursuits. Consequently, the proliferation of internet freedom may inadvertently contribute to a culture of intellectual laziness, stifling the development of independent thought and fostering reliance on external sources for information and decision-making. In essence, while internet freedom offers unprecedented opportunities for knowledge dissemination and connectivity, its unfettered proliferation necessitates vigilant consideration of its potential societal implications and the preservation of ethical standards in digital consumption.

c. Consumerism behaviour

The presence of e-commerce and online shopping applications results in consumerism and hedonism behaviour because the prices provided are cheaper than traditional markets which makes people interested in shopping and using funds online which makes an addiction for its users. Cash is now declining in existence due to the emergence of e-wallets or what is often heard as digital wallets. Between e-commerce and e-wallet, there is a connection so that in its implementation it cannot be separated.

In addition, information technology that connects all communities globally allows individuals to know each other's cultures. Indonesian people are easily influenced by the flow of globalisation which makes them imitate other cultures, which can cause local culture to slowly disappear. The meaning of nationalism seems meaningless when people have been indoctrinated by the culture of modernity, this is the root of moral degradation. Moral degradation is the phenomenon of character deterioration of a person or group of people (Tranggono et al., 2023). Lickona said, there are 10 signs of degradation symptoms that must be considered in order to change for the better; 1) violence and chaos, 2) theft, 3) cheating, 4) violation of established rules, 5) fights between students, 6) intolerant behaviour, 7) use of bad language, 8) deviation and early sexual maturity, 9) suicide, 10) drug addiction (Tranggono et al., 2023). In terms of technological development in the era of globalisation, the factors that cause moral degradation include smartphones, internet networks and social media. Meanwhile, the factors of moral degradation in today's young generation are motivated by several aspects. Factors that contribute to moral degradation in adolescents including generations Y and Z, among others: 1) The influence of the environment. 2) Lack of moral education. 3) Changes in culture and social values. 4) Psychological problems. 5) Social pressure. 5) Lack of supervision and support.

Laws that regulate and force must contribute to the problems that occur due to the presence of information technology in Indonesia. Moral decline and behavioural changes require the law to play an extra role because inevitably technology is growing and even Japan has declared Society 5.0.

Ethics in using information technology is very important in the era of misuse of technology in various fields, the importance of self-awareness to use information technology wisely in order to create effective use of technology. Self-awareness to protect the privacy and security of other individuals' personal data and avoid illegal or unlawful activities is also included in the ethics of using information technology. Dependence on technology must be overcome by starting to motivate yourself, then making self-restrictions on the use of technology and planning a schedule or schedule of daily activities to be carried out. In addition, outdoor activities can also help to minimise information technology dependence because excessive use of information technology will also have adverse effects that can reduce mental health. People should use information technology and social media as tools for effective and productive communication, not as a substitute for real social interaction.

The role of government and law enforcement also plays an important role in overcoming the problems that occur. To overcome this, the government can make various efforts to make people aware of the wisdom of technology and ensure that the laws enforced are obeyed and upheld within the community. For example, training on social media etiquette (digital education) is now considered a very important necessity, although it is still considered an uncommon topic to do. However, the increasing percentage of moral decline among the younger generation and the lack of awareness in the use of information technology and social media necessitates such education because today's young people such as Generation Y and Z have the expertise to disseminate and access information quickly through social media platforms. Moreover, the lack of filters against negative information on social media makes it easier for users to consume, which can have a negative impact on the morals of the nation's children, as they can imitate information that they should not freely obtain (Zeva et al., 2023).

This digital education can be organised through webinars or seminars with the theme of legal awareness and information technology, which is expected to create a smart society in using the progress that is being lived. In addition, education can also be carried out by using new mass media, namely social media by creating various interesting counselling content to be published so that it spreads quickly to the public. The goal is none other than to form quality human resources by utilising the sophistication of information technology in order to advance the nation's life towards a better Indonesia. The government and law enforcers also play a role in making clear and relevant regulations related to the use of this information technology and must update rules or regulations that keep up with the times because now technology is no longer something foreign to society but has become commonplace that must be considered in order to create comfort, safety and usefulness in technology and information.

5. Conclusion

The legal challenge in overcoming changes in social behaviour due to the development of technology and information is a new and complex problem. Changes in information technology cause various changes in society such as changes in behaviour, ways of communicating or interacting, ways of thinking, and ways of acting. One of the challenges in facing the era of globalisation with technological development is actions that can violate the privacy of others. The presence of social media and information technology provides an opening for the misuse of personal data, so it is necessary to have strong legal regulations to protect the public from data misuse by irresponsible parties. Various fake news, hate speech and consumption of negative content are problems that must be faced. The law plays a role in providing filters and regulating individual lives so that they do not get out of the social norms that apply in society and certainly do not violate the laws that apply in Indonesia. One of the factors resulting from technology dependence is the convenience and freedom in accessing the internet and media. Changes in social behaviour caused by technology also raise questions about individual responsibility in using technology and social media with good ethics. There needs to be awareness of the consequences of every online action, as well as education in developing digital awareness among the community. However, technological development does not always have a bad connotation, technology also has a positive side that plays an important role in advancing human welfare which can advance civilisation. Therefore, existing information technology must be used wisely in accordance with social rules, social norms and laws and regulations. Only with the wise and intelligent use of information technology will the community feel the benefits of this technology. Collaboration between society, government, law enforcement and legal institutions is the key to the creation of optimal regulation and law enforcement.

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