

INTERNATIONAL JOURNAL OF SOCIAL SCIENCE AND HUMANITIES

Vol. 1 No. 1, June (2022) | e-ISSN: 2830-6074 DOI: https://doi.org/10.52005/literate.V1I1.4 https://literate.nusaputra.ac.id/



Increasing the Role of Technology in Functions of Law as a Tool of Social Engineering

CSA Teddy Lesmana*

Study Program of Law, Nusa Putra University, Indonesia

ARTICLE INFO

Article History

Received 13 February 2022 Revised 15 April 2022 Accepted 15 June 2022

Keywords

increasing technology law social engineering

ABSTRACT

The impact of technological advances in law is overwhelming, on one side the law needs to predict and anticipate changes in human behavior due to the use of technology, while on the other side the law also needs to utilize technology as a means that can be used to achieve the aims and objectives of the law. The problem is that law and technology do not originate from the same conception. So that maximizing the role of technology to accelerate the occurrence of social engineering in order that changes that occur in society can be controlled and run in an orderly manner, to create the national goals of a country is a serious challenge. Increasing the role of technology in the development of the concept of law as a tool of social engineering is carried out by realizing the convergence of technology and law in various fields of law, both in the normative and practical dimensions.

© 2022 The Authors. Publishing services by Nusa Putra Press. This is an open access article distributed under the CC BY-NC 4.0 license (http://creativecommons.org/licenses/by-nc/4.0/)

INTRODUCTION

A Dean of Harvard Law School in the 1903s, Roscoe Pound once said that the law must be stable, but should not be static and rigid. (Pound, an Introduction to the Philosophy of Law, 1974) This statement can be understood as a consequence of the nature of the law which needs to have elements of certainty and predictability, therefore the law must be

stable and tend to be rigid. (Paunio, 2019) On the other hand, the law must also be flexible and dynamic (Roosevelt, 2019) in such a way that it can follow the development of human behavior and social changes.

This thought seems to be increasingly proven because in its development the law has not only undergone evolution, it can

^{*} Email: teddy.lesmana@nusaputra.ac.id





even be said to have experienced a very significant revolution. This is due to social changes as a result of massive advances in technology. Consequently, the law is not only stable on the basis of a philosophical and humanist character, but the law also ultimately has an economic and technological character that tends to be dynamic. (Budhijanto, 2014)

The role of technological advances in law is enormous. On the one hand, the law needs to predict and anticipate changes in human behavior due to the use of technology, while on the other hand the law even needs to use technology as a means that can be used to achieve the aims and objectives of the enactment of a law.

In developing countries such as Indonesia, the use of technology in the beginning did make the law only need to focus on anticipatory efforts and solving problems that arise as a result of the use of technology in people's lives. Because it cannot be denied that technological advances have many risks. The use of technology can have negative impacts such as on human health and the environment, raises concerns about individual autonomy and privacy, as well as negative consequences related to community values or morals.

This kind of risk often creates new problems and disputes in society. (Mandel, 2007) However, in the end the law must begin to consider technology to participate in an integrated role in the effort to carry out legal functions in the midst of society. One of the functions of law taught in the great theory of social change is social engineering theory. In many literatures (Gochhayat, 2010) it is

known that this teaching is the idea of Roscoe Pound who seeks to see the function of law as a means or tool for doing social engineering. According to this concept, the law is expected to influence and even change the perspective and behavior in people's lives. Pound argues that law is not only used to perpetuate power, but also law as a tool of social engineering.

As technology has been able to make tremendous social changes, law should also be able to maximize the role of technology to accelerate social engineering with the aim that changes that occur in society can be controlled and run in an orderly manner.

Literature review (Kusumaatmadja, 2006) shows that social engineering efforts need to be carried out, especially in developing countries such as Indonesia, which desperately need the law as a tool to engineer people's attitudes and behavior to support and realize national development goals.

LITERATUR REVIEW

A number of studies have been conducted to find the interplay between law and technology. A recent study by Jishitha Kuppala (Kuppala, 2022) seeks to provide technology-based solutions to the high level of law enforcement activities through the use of artificial intelligence technology. Research results show the influence of Artificial Intelligence technology in Indian law has the potential to overhaul and assist the court system and law enforcement efforts to safeguard the welfare of society.





In his research, Luo Wanhua (Wanhua, 2019) highlights the very high level of law enforcement activities that have the potential for inefficiency and failure. The research results propose the idea of using big databased information technology as a new model in law enforcement supervision to provide effective support for enforcement supervision and management. Meanwhile, in the field of patent law, Shuijing Hu (Shuijing Hu, 2019) examines the challenges of the artificial intelligence revolution which makes patent law, especially in the computer field, must exceed existing ethical standards, the rule of law, social order and public management systems. The results show that technical problems need to be supported by the latest technology so that interested parties can focus more on the subject of the patent to be claimed.

New ideas on technological innovations that support law enforcement are also widely proposed by researchers. For example, Mohammad Rasmi Al-Mousa (Al-Mousa, 2021) proposed a generic proactive model for the analysis of cybercrime. This research shows that the volume of data generated and handled is immense due to the increasing number of IoT applications worldwide. As a result, when cybercrimes occur, the volume of digital data that needs to be handled is vast. So that the generic proactive model is very suitable for the analysis and forensic investigation of cybercrime.

From a number of contemporary research results on law and technology that have been described, it is known that the use of technology in the legal field offers significant improvements in achieving legal objectives.

Therefore, this research tries to propose a much broader perspective, namely seeing the role of technology as a very important tool for developing the concept of law as a tool of social engineering. The goal is that the role of technology in supporting the realization of legal goals can be seen thoroughly and comprehensively.

Law as a tool of social engineering is a concept in the legal field that is quite old but is still very relevant even in this era of technological progress. This teaching was initiated by Roscoe Pound who tried to see the function of law as a means or tool to implement social engineering. (McManaman, 1958)

According to this concept, the law is expected to influence and even change the perspective and behavior in people's lives so that they are in line with the goals to be achieved by a country. Thus the legal function must be supported by other aspects that have a significant influence in people's lives.

In this modern age, technology has taken over the role that was previously played by things like religion, morals (Collinsworth, 2017) and ideology, namely influencing human behavior to cause social change as it has also been proven by the results of the research described in this section.

METHOD

The method used in this study is normative legal research which emphasizes and leads to a literature review in order to collect data from various literatures in research related to the legal issues under study





(AnitaChristiani, 2015). This method is used in order to be able to conduct further searches on the concept of law as a tool of social engineering which allows it to get support from technological aspect. Using the conceptual approach (Taekema, 2020), this research examines and assesses legal concepts, legal principles and theories related to technology and theory of law as a tool of social engineering.

Because this research focuses on finding legal principles, as well as legal doctrines in order to answer predetermined legal issues, this type of research is normative. However, no matter how normative this is, it does not merely deny the plurality of legal science itself.

Normative and factual aspects in legal science cross each other, recognizing not only an exposing dimension (beschrijven) but also a ruling dimension (voorschrijven). Theoretical apprehensioin is practically relevant. (Ervina Dwi Indriati, 2022) Here, it seems that legal dogmatics is a complex phenomenon, including the influence of technology in it.

The choice of this method is with the intention that the normative study of legal science in this study remains close to empirical observation. This means that the normative analysis carried out is clearly seen as being able to become prescriptive for legal issues both at the normative level and in practice.

DISCUSSION

1. The Role of Technology in Social Engineering and Social Change

Basically, social change is a process of changing the structure or order and behavior in society experienced by members in a community group as a result of a cause. John Lewis Gillin and John Phillip Gillin (Deflem, 2012) define social change as a variation of accepted ways of life, either because of changes in geographical, cultural, material conditions, population composition, ideology, or because of diffusion or inventions amidst a community.

Actually, social change in society due to the use and development of technology is a necessity that will definitely happen. Because society as a user of technology is developing along with technology. They create a mindset as well as behavior that follows the latest updates and trends brought by technology.

Other factors that cause social change to develop along with technological advances are, for example, the discovery of many innovations, revolutions in life in society itself whose activities have been heavily supported by technology, increasing population and the perception and culture of a society. Therefore, it can be said that technology is something that is culturally embedded in human life. (Ihde, 1991)

As something that is inherent in society, the use of technology which was originally intended to be good, namely to help human life, can in fact have a negative impact such as to human health and the environment, the emergence of concerns about individual autonomy and privacy, as well as negative consequences related to community values or moral.





In such a situation, some people assume that technology has become something that is autonomous and dominates human life. Technology becomes artificial, it is even said to be able to determine its own destiny and develop in a causal dimension that places means more important than ends. Finally, technology becomes something autonomous power that is not controlled and places humans as slaves. (Helena M. Jerónimo, 2013)

As a consequence of such point of view, it is not exagerated to say that the result of massive technological developments in recent decades has driven many social changes in a negative direction. Technology is said to be part of the birth of various forms of contemporary crime such as cybercrime and the misuse of technology by one or more people that inflicts a financial loss of other people, community groups and even a country, both materially and immaterially. (Rob Wainwright, 2017)

Such technological point of view is not entirely true, especially when referring to the thoughts of Jurgen Habermas (Bar-Tura, 2016) who assess technology as a system. According to this argument, technology is only technical and instrumental. The orientation of technology is on the implementation of effective and efficient problem solving, including social problems that arise from the existence of social change itself.

2. Convergence of Technology and Law as a tool of Social Engineering

In the perspective of modern social science, social engineering occurs because people act in groups as a dynamic process. This means that the social life of the community is seen as a condition where there is a growing balance in a dynamic society. Therefore, a person's actions cannot be driven solely by individual considerations but must always be related to what other members of society expect of him.

Based on this analysis, social engineering efforts through law require facilities or instruments that can help and even play more roles in creating directed social change to support the realization of a country's national development goals. The most appropriate instrument used in this era is the maximum use of technology to support the function of law as a tool of social engineering because technology is culturally embedded in social society.

Consideration of technological analysis and its influence on human life and the environment must be the main variable in the process of forming a country's laws. In this context, an adequate legal norm by prioritizing aspects of technological values must be in line with the classical legal view, namely law as a set of rules and principles that regulate human life in a society based on philosophical and moral bases. The values of technology in law will strengthen the implementation of law in the aspects of institutions and processes with the result that the law becomes more effective and efficient.

Legal policies in developing countries need to immediately harmonize the formation of national laws that can strengthen the role of technology in realizing law as a tool of social engineering in various legal fields such as





economic and business law, information technology law and even criminal law.

In the formation of business and economic law in developing countries such as Indonesia, the principles in the General Agreement on Trade in Services-World Trade Organization (Delimatsis, 2018) and the World Intellectual Property Organization (María C. Parra-Meroño, 2020) are one of the things that really need to be considered in the formation of respective national laws of each country. The government is obliged to implement the concept of transparency of regulations by utilizing technology as its main means.

The law needs to formulate rules that make all information and regulations easily accessible to all parties. Transparency in regulations is also needed so that countries that have advanced in the field of technology can be interested in entering into bilateral agreements. So that the transfer of knowledge and technology can occur which in the end will encourage the pattern of using technology in society to be better and have an impact on increasing business and economic stability.

In the financial sector, the law needs to carefully regulate the implementation of financial technology, in addition to the protection of customers' personal data, the law needs to force financial technology business operators to create applications that allow monitoring and overseeing of these business processes to run properly.

The next convergence of law and technology in the field of information technology concerns VoIP and Broadband issues which in several developing countries including Indonesia have not been regulated properly. In fact, this sector is very important considering the need for these two services is very high.

Likewise in the criminal sector, Law and technology must be maximally converged in such a manner that the technological sophistication of the perpetrators of crimes exceed the not technological sophistication of law enforcers. The law must maximize the role of technology to create maximum crime prevention tools. Criminal law enforcement needs to have big data that contains all the information needed by law enforcement to identify criminals, recognize crime trends and help take appropriate action to tackle crime.

The convergence of law and technology in crime prevention can be realized by creating a number of portals and applications such as the national crime information center portal, the law enforcement center portal and information technology-based applications that enable the rapid exchange of national crime data.

The acceleration of innovation in the manufacture of robots that support criminal law enforcement efforts also needs to be continuously supported. This law enforcement robot will be very helpful in many law enforcement efforts such as surveillance robots in dangerous situations in the threat of bombs and pursuit of criminals.

There are many other forms of legal and technological convergence that need to be continuously researched so that technology



ITERATE

LITERATE: INTERNATIONAL JOURNAL OF SOCIAL SCIENCE AND HUMANITIES

Vol. 1 No. 1, June (2022)

can really play a maximum role in supporting the function of law as a means of social engineering, such as the use of artificial intelligence in the formation of laws and regulations.

The formation of legal rules that can accommodate all things that are closely related to technology needs to be continued. Artificial Intelligence technology support, can help lawmakers in forecasting and ranking things that develop in society.

Thus technology will play an important and maximal role as a legal tool in social engineering to create conditions of social change that support the realization of national goals. The use of technology that is regulated wisely by law will ultimately create a good legal culture as a fundamental thing to create a national legal system that is not only good but also effective and efficient.

CONCLUSION

In the normative dimension, the role of technology in law is oriented towards the implementation of effective and efficient problem solving, including social problems arising from social change. Therefore, strengthening the role of technology in the development of the concept of law as a social engineering is a necessity that needs to be realized in the form of technological and legal convergence in various fields such as in the fields of business and economic law, information technology law and criminal law. Technology in the legal dimension of social engineering can create conditions for social change that support the realization of national goals by maximizing innovation in the fields of robotics, artificial intelligence, and the use of information technology. The use of technology in the legal field that is regulated wisely will engineer social conditions that create social change and a fine legal culture.

REFERENCE

AhmedAbriane, B. a. (2020). Industry 4.0 and its Implications for the Financial Sector. *Procedia Computer Science*, 177(1), 496-502. Al-Mousa, M. R. (2021). Generic Proactive IoT Cybercrime Evidence Analysis Model for Digital Forensics. 2021 *International Conference on Information Technology (ICIT)*. Amman, Jordan.

AnitaChristiani, T. (2015). Normative and Empirical Research Methods: Their Usefulness and Relevance in the Study of Law as an Object. 3rd Global Conference on Business and Social Sciences (GCBSS-2016) on "Contemporary Issues in Management and Social Sciences Research". Kuala Lumpur.

Bar-Tura, A. (2016). Habermas and Public Reason in the Digital Age: Technology and Deliberative Democracy. Cichago: Loyola University Chicago.

Budhijanto, D. (2014). Teori Hukum Konvergensi. Bandung: Refika Aditama.

Collinsworth, E. (2017, 7 14). *Knowledge at Wharton*. (Wharton School of the University of Pennsylvania) Retrieved 5 9, 2022, from https://knowledge.wharton.upenn.edu/article/decline-of-morality/

Deflem, M. (2012). Sociology of Law: Visions of a Scholarly Tradition. Camridge: Cambridge University Press.

Delimatsis, P. (2018). GATS Basics - Revisiting Some Basic Notions and Concepts of the General Agreement on Trade in Services. *Tilburg Law School Research Paper*, 003, 1018.

Ervina Dwi Indriati, S. A. (2022). Philosophy Of Law And The Development Of Law As A Normative Legal Science. *International Journal of Educational Research & Social Sciences*, 3(1), 314-321.

Gochhayat, S. A. (2010). 'Social Engineering by Roscoe Pound': Issues in Legal and Political Philosophy. SSRN.

Helena M. Jerónimo, J. L. (2013). Jacques Ellul and the Technological Society in the 21st Century. Dordrecht: Springer.





LITERATE: INTERNATIONAL JOURNAL OF SOCIAL SCIENCE AND HUMANITIES

Ihde, D. (1991). *Instrumental Realism: The Interface between Philosophy of Science and Philosophy of Technology.* Bloomington: Indiana University Press.

Kuppala, J. (2022). Benefits of Artificial Intelligence in the Legal System and Law Enforcement. 2022 International Mobile and Embedded Technology Conference (MECON). Noida, India.

Kusumaatmadja, M. (2006). Konsep-Konsep Hukum dalam Pembangunan. Bandung: PT Alumni.

Mandel, G. N. (2007). History Lessons for a General Theory of Law and Technology. *Minnesota Journal of Law, Science & Technology,* 8(2), 551-570.

María C. Parra-Meroño, M. D.-J.-V. (2020). The gender gap in intellectual property in Latin America and Iberia: the case of patents. *International Journal of Intellectual Property Management*, 10(4), 345-374.

McManaman, L. J. (1958). Social Engineering: The Legal Philosophy of Roscoe Pound. St. John's Law Review, 33(1), 1-147.

Paunio, E. (2019). Beyond Predictability – Reflections on Legal Certainty and the Discourse Theory of Law in the EU Legal Order. *German Law Journal*, 10(11), 1469 - 1493.

Pound, R. (1974). an Introduction to the Philosophy of Law. London: Yale University Press.

Pound, R. (1974). An Introduction to the Philosophy of Law. London: Yale University Press.

Rob Wainwright, J. K. (2017). Crime in the age of technology. The Hague: Europol's.

Roosevelt, K. (2019, December 14). Certainty vs. Flexibility in the Conflict of Laws. Penn Law: Legal Scholarship Repository, p. 2019.

S L Mardiana, F. H. (2020). The contribution of financial technology in increasing society's financial inclusions in the industrial era 4.0. *IOP Conference Series: Earth and Environmental Science*. IOP Publishing Ltd.

Shuijing Hu, T. J. (2019). Artificial Intelligence Technology Challenges Patent Laws. 2019 International Conference on Intelligent Transportation, Big Data & Smart City (ICITBS). Changsha, China.

Taekema, S. (2020). Methodologies of Rule of Law Research: Why Legal Philosophy Needs Empirical and Doctrinal Scholarship. *Law and Philos*, 40, 33-66.

Wanhua, L. (2019). Research and Application of Data Cage for Traffic Administrative Law Enforcement Based on Big Data. 019 IEEE 4th Advanced Information Technology, Electronic and Automation Control Conference (IAEAC). Chengdu, China.

