ARTIFICIAL INTELLIGENCE IN THE AUSPICES OF LAW: A DIVERGE PERSPECTIVE

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Abstract
Artificial Intelligence (AI), encompassing computation for perception, reasoning, and action, poses complex legal considerations. This study explores AI's impact and its legal ramifications, particularly its autonomy in communication and creation, raising concerns about language, intellectual property, and ethical accountability. Influenced by Common Law and Civil Law systems, discussions vary. Evaluating AI creator liability uncovers intricate connections between AI's autonomy, intentionality, and creators' roles. The approach used in this article are based on normative method with multidisciplinary discipline. The results are that though AI creators aren't directly liable, vicarious liability could link actions to AI behaviors based on programming choices. Balancing innovation and accountability calibrated "creator immunities" are vital. Unchecked immunities could impede responsible AI development; measured immunities might encourage ethical practices, considering AI nuances and societal impacts. Positioning AI as a legal subject necessitates tailored approaches within ethical boundaries. The proposition of AI as a derivative legal subject while setting clear limits is pivotal. Adapting legal systems to evolving AI landscapes and reconciling advancement with societal well-being, is crucial. AI's intricate accountability, its legal standing, and creator liabilities and immunities demand reshaping legal frameworks for an ethical AI environment.
Keywords*: Artificial Intelligence, Creator Liabilities, Legal Subject.*

Intisari

Kecerdasan Buatan (AI), yang mencakup komputasi persepsi, penalaran, dan tindakan, menimbulkan pertimbangan hukum yang kompleks. Studi ini mengeksplorasi dampak AI dan konsekuensi hukumnya, terutama otonominya dalam komunikasi dan kreasi, yang menimbulkan kekhawatiran tentang bahasa, kekayaan intelektual, dan akuntabilitas etis. Melalui sistem *Common Law* dan *Civil Law*, pembahasannya pun beragam. Mengevaluasi pertanggungjawaban pencipta AI mengungkap hubungan yang rumit antara otonomi, kesengajaan, dan peran pencipta AI. Pendekatan yang digunakan didasarkan pada metode normatif dengan disiplin ilmu yang beragam. Hasilnya adalah bahwa meskipun pencipta AI tidak bertanggung jawab secara langsung, doktrin *vicarious liability* dapat menghubungkan tindakan dengan perilaku AI berdasarkan pilihan pemrograman. Menyeimbangkan inovasi dan akuntabilitas, kekebalan pencipta yang terukur sangat penting. Kekebalan yang tidak terkendali dapat menghambat pengembangan AI yang bertanggung jawab; kekebalan yang terukur dapat mendorong praktik-praktik etis, dengan mempertimbangkan nuansa AI dan dampak sosial. Memosisikan AI sebagai subjek hukum memerlukan pendekatan yang disesuaikan dengan batasan etika. Proposisi AI sebagai subjek hukum turunan sambil menetapkan batasan yang jelas sangat krusial. Mengadaptasi sistem hukum dengan lanskap AI yang terus berkembang dan menyelaraskan kemajuan dengan kesejahteraan masyarakat, sangatlah vital. Pertanggungjawaban AI yang rumit, kedudukan hukumnya, dan kewajiban serta kekebalan pencipta menuntut pembentukan kembali kerangka kerja hukum untuk lingkungan AI yang etis.
Kata Kunci*: Kecerdasan Buatan, Tanggung jawab Pencipta, Subjek Hukum.*

A. Introduction

Artificial Intelligence, commonly referred to as AI, stands as one of the most remarkable breakthroughs of the 21st century.[1] Its definition, however, remains elusive, defying a singular encapsulation. While attempts have been made to capture its essence, the words of Winston come close to a comprehensive understanding: AI is an intricate study of computation aimed at endowing machines with the ability to perceive, reason, and act. In the spirit of these insights, a more nuanced interpretation emerges — AI assumes the role of a dynamic entity that imbibes, learns, and adapts from an ever-expanding repository of data.[2] This ceaseless process fuels its evolution, empowering AI to comprehend, respond, and adjust with astonishing agility.

1 Haroon Sheikh, Corien Prins, and Erik Schrijvers, Artificial Intelligence: Definition and Background (London: Springer International Publishing, 2023), https://doi.org/10.1007/978-3-031-21448-6_2.

2 Patrick Henry Winston, *Artificial Intelligence* (Boston: Addison-Wesley, 1992).

As AI steadily advances, it carries the promise of transformative changes across various facets of existence.

A pivotal instance materialized in 2017 when researchers at the Facebook Artificial Intelligence Research lab embarked on training chatbots to negotiate. However, a profound shift occurred as these bots spontaneously devised a communication system of their own.[3] This episode underscores the potential of AI to revolutionize language and communication, pushing the boundaries of conventional norms and propelling us into a future where the discourse is redefined. Yet, alongside these strides, concerns arise about the ethical dimensions that AI introduces. Instances of AI-generated content, such as the eerily convincing music clips featuring renowned artists like Drake and The Weekend, emphasize the potency of Deep Learning algorithms in crafting content by mimicking patterns from extensive training data.[4] These occurrences hint at the ethical dilemmas stemming from AI's capacity for indiscriminate replication and innovation. Notably, this conundrum sparks discussions on accountability, probing into the question of who should bear the responsibility for AI's actions and creative outputs.

In the realm of legality, the distinction between natural persons and juridical entities serves as a cornerstone. Natural persons are individuals bestowed with inherent legal standing from birth, while juridical entities encompass a group of individuals united by contractual arrangements, seeking legal recognition to facilitate their operations.[5] With AI's accelerating presence, scholars like Yuwono et al. posit that the time has come to allocate a specialized legal status to AI. This perspective resonates with the idea of conferring AI with limited legal personhood, reflecting the acknowledgment of its capabilities and potential repercussions.[6] As nations endeavor to navigate

3 Karla Lant, "A Facebook AI Unexpectedly Created Its Own Unique Language," Futurism, June 16, 2017, https://futurism.com/a-facebook-ai-unexpectedly-created-its-own-unique-language.

4 University of York, "AI-Generated Music Inferior to Human-Composed Works, According to Study," york.ac.uk, 2023, https://www.york.ac.uk/news-and-events/news/2023/research/ai-generated-music-inferior-to-human-composed/.

5 Elvia Arcelia Quintana Adriano, "Natural Persons, Juridical Persons and Legal Personhood," Mexican Law Review 8 (July 2015): 101–18, https://doi.org/10.1016/j.mexlaw.2015.12.005.

6 Yuwono Prianto, Viony Kresna Sumantri, and Paksi Yudha Sasmita, "Pros and Cons of AI Robot as a Legal Subject," *in Proceedings of the Tarumanagara International Conference on the Applications of Social Sciences and Humanities (TICASH 2019)* (Atlantis Press, 2020), https://

the legal landscape, a call for unified international collaboration emerges, seeking to construct a harmonized framework that respects cultural nuances and local exigencies, mirroring the philosophy of historical jurisprudence advocated by Savigny[7].

Amid these deliberations, researchers such as Zhifeng Wen and Deyi Tong delve into the pivotal question of AI's legal subjectivity. While AI might not fulfill the prerequisites to be an original legal subject akin to a natural person, the concept of a derivative legal subject emerges as a plausible avenue.[8] This prompts introspection into the prospect of AI's liability for actions, ranging from unintentional deception to creative ventures stemming from data analysis. Equally pressing is the query of how to demarcate the boundaries of AI's legal personhood, effectively delineating its rights and responsibilities within the realm of law. In the tapestry of AI's expanding influence, intricate questions unfurl, transcending the realms of technology, ethics, and jurisprudence. From these findings, two questions emerge, first, is it possible for an AI to held liable for its own action neither done by misleading a group of people, making music using the data it received, or did some unethical violation that even its creator cannot build a model to rectify the system? Second, how to measure the limitations of an AI as a legal subject in order to stipulate its rights to become a proper legal subject?

The research undertaken in this paper is rooted in a legal-ethical analysis methodology, which offers a comprehensive exploration of the intricate dynamics between artificial intelligence (AI) and established legal principles. Employing a qualitative approach, the study extensively examines a range of primary and secondary sources, including legal statutes, case law, academic literature, philosophical discussions, and ethical considerations. This methodological framework enables a thorough investigation into

doi.org/10.2991/assehr.k.200515.067.

7 Friedrich Carl von Savigny (1779-1861), a law expert from Germany who says that law is not something by-design, instead law is something that emerge from the society, law does not acknowledge cessation, for when the law stopped growing with the society then it becomes momentary, meaning that the law become an instrument of politics (becomes a by-design product).

8 Zhifeng Wen and Deyi Tong, "Analysis of the Legal Subject Status of Artificial Intelligence," *Beijing Law Review* 14, no. 01 (2023): 74–86, https://doi.org/10.4236/blr.2023.141004.

the multifaceted dimensions of AI's legal status, liability, and potential immunities. The research delves into the complexities arising from AI's lack of consciousness, investigating how this fundamental attribute poses challenges in ascribing liability for AI-driven actions. Through careful analysis of legal cases and precedents, the study navigates the evolving legal landscape and its application to AI systems. Ethical considerations are interwoven throughout the analysis, further enriching the research by highlighting the ethical dilemmas that emerge when attempting to define the legal boundaries of AI's actions. By meticulously deconstructing and interpreting legal doctrines and principles, the research culminates in insightful conclusions and recommendations. It asserts that a nuanced perspective is required when determining the legal subjectivity of AI entities, advocating for a derivative legal subject status that acknowledges AI's unique attributes while preserving ethical considerations. The paper's comprehensive analysis contributes to the ongoing discourse on AI's legal standing, presenting a thought-provoking exploration that considers both legal tenets and ethical imperatives.

B. Artificial Intelligence & Law: Navigating the System

The intersection of AI and law has brought forth a dynamic landscape with profound implications for legal systems globally. AI, characterized by its ability to simulate human intelligence, learn from data, and make decisions, has rapidly advanced across various domains, including healthcare, finance, and entertainment. In the realm of law, AI has demonstrated immense potential in enhancing legal research, contract analysis, and even predicting legal outcomes. However, this technological evolution presents a spectrum of legal challenges and ethical concerns that necessitate careful consideration. At the core of the AI and law discourse lies the question of accountability. As AI systems autonomously engage in decision-making processes, determining responsibility in cases of errors or biases becomes complex.[9] Legal frameworks need to adapt to hold both AI developers and users accountable, ascribing

9 Tripti Bhushan, "Artificial Intelligence, Cyberspace and International Law," *Indonesian Journal of International Law* 21, no. 2 (2024): 269–302.\\uc0\\u8221{} {\\i{}Indonesian Journal of International Law} 21, no. 2 (2024

liability based on factors such as system design, control, and foreseeability of outcomes.[10] Furthermore, the transparency and the explainability of AI decisions present hurdles for traditional legal principles like due process and the right to an explanation. Achieving a balance between protecting proprietary algorithms and ensuring transparency for legal compliance poses a delicate challenge.[11]

Developing regulations that mandate AI systems to provide understandable justifications for their decisions could promote legal adherence and user trust. Data privacy emerges as another pivotal concern. AI's effectiveness relies on vast amounts of data, often including personal information. In a world where data breaches and privacy violations are frequent, harmonizing AI's capabilities with privacy regulations like the General Data Protection Regulation (GDPR) is essential. In the recently enacted AI Act (European AI Act) there lies a correlation between GDPR and AI Act, for instance in Title II Article 5 about the Prohibited Artificial Intelligence Practices, that AI used in market are prohibited to exploit the vulnerability of a person or any specific group. Consent mechanisms, data anonymization, and data minimization strategies become critical when integrating AI into legal processes. Moreover, biases encoded in training data can perpetuate discrimination and inequity in AI-assisted legal tasks. Mitigating these biases requires ongoing monitoring, refining, and diversifying training data, coupled with legal mechanisms that address discriminatory outcomes and provide remedies.[12] The burgeoning landscape of AI and law is not without its ethical implications.[13] The very

10 Anna Sidorova and Kashif Saeed, "Incorporating Stakeholder Enfranchisement, Risks, Gains, and AI Decisions in AI Governance Framework," 2022, https://doi.org/10.24251/HICSS.2022.722.

11 Owain Evans et al., "Truthful AI: Developing and Governing AI That Does Not Lie," 2021, https://doi.org/10.48550/ARXIV.2110.06674.lying -- the use of verbal falsehoods to deceive -- is harmful. While lying has traditionally been a human affair, AI systems that make sophisticated verbal statements are becoming increasingly prevalent. This raises the question of how we should limit the harm caused by AI \"lies\" (i.e. falsehoods that are actively selected for

12 Anna Rogers, Timothy Baldwin, and Kobi Leins, "'Just What Do You Think You're Doing, Dave?' A Checklist for Responsible Data Use in NLP," in *Findings of the Association for Computational Linguistics: EMNLP 2021,* 4821–33, https://doi.org/10.18653/v1/2021.findings-emnlp.414; Sidorova and Saeed, "Incorporating Stakeholder Enfranchisement, Risks, Gains, and AI Decisions in AI Governance Framework."

13 David Leslie, "Understanding Artificial Intelligence Ethics and Safety: A Guide for the Responsible Design and Implementation of AI Systems in the Public Sector" (Zenodo, June 11, 2019), https://doi.org/10.5281/ZENODO.3240529.

notion of an AI-driven legal system raises questions about the role of empathy, discretion, and human judgment in legal decision-making. While AI can expedite legal processes, there remains a concern that the absence of human oversight could erode the inherent fairness and empathy that humans bring to legal proceedings.[14] Ethical frameworks must be established to ensure that AI is used as a tool to enhance, rather than replace, human legal expertise. This demands interdisciplinary collaboration between legal scholars, ethicists, and technologists to formulate guidelines that preserve human values in the face of AI advancement. In conclusion, the convergence of AI and law has ignited a transformative journey that necessitates profound legal and ethical deliberation.[15]

Striking a balance between accountability, transparency, data privacy, and ethical considerations is pivotal to harnessing AI's potential while safeguarding the fundamental principles of justice and fairness in legal systems. As AI continues to evolve, legal frameworks must evolve in tandem, guiding the responsible development and deployment of AI technologies within the context of the law. The ongoing dialogue between legal experts, technologists, and society at large will be instrumental in shaping an AI-augmented legal landscape that upholds the rule of law and respects the rights of individuals in an increasingly digitized world.

C. AI as a Legal Subject or Legal Object?

The contemplation of whether AI should be regarded as a legal subject, or a legal object engenders a multifaceted discourse within the intricate tapestries of both Common Law and Civil Law systems. Delving into the realm

14 Tomas Folke et al., "Explainable AI for Natural Adversarial Images," 2021, https://doi.org/10.48550/ARXIV.2106.09106; Ilse Verdiesen, "The Design of Human Oversight in Autonomous Weapon Systems," in Proceedings of the Twenty-Eighth International Joint Conference on Artificial Intelligence (Twenty-Eighth International Joint Conference on Artificial Intelligence {IJCAI-19}, Macao, China: International Joint Conferences on Artificial Intelligence Organization, 2019), 6468–69, https://doi.org/10.24963/ijcai.2019/923.China: International Joint Conferences on Artificial Intelligence Organization, 2019

15 Thomas Hauer, "Ethical Behavior and Legal Regulations in Artificial Intelligence," in *4th International Conference on Advanced Research Methods and Analytics (CARMA 2022)* (CARMA 2022 - 4th International Conference on Advanced Research Methods and Analytics, Universitat Politècnica de València, 2022), https://doi.org/10.4995/CARMA2022.2022.15013.

of Common Law, the proposition of AI as a legal subject unveils a trove of intricate legal and philosophical questions. Elevation of AI entities to a status akin to legal persons – be it humans or corporations – propels contemplation on uncharted territories.[16] Central inquiries emerge, encompassing AI's potential to engage in contractual relations, the intricate labyrinth of accountability for AI-mediated actions, and the profound ethical underpinnings of ascribing legal rights and obligations to entities devoid of human consciousness. In stark contrast, the concept of AI as a legal object adheres to existing legal paradigms, with AI viewed as an extension of human invention and skill. This viewpoint shifts emphasis to the duties attached to the developers, operators, or users of AI systems, generating reflections that parallel the well-established conceptions of product liability and the exercise of lordship over technical artifacts.[17]

Most countries in their lawmaking system does not acknowledge the terms AI, best known terms related to AI is "computer-generated" but it is important to take note that in specific meaning, computer-generated works (CGW) are much more emphasized to a software being used to aid the work of a person (not sentient) as defined in Cambridge Dictionary computer-generated is something that produced using a computer program (the word using is not the same as the word by).[18] But this term has its own different meaning in some regulations. United Kingdom in its Copyrights Act 1988 acknowledge that AI existed using the term CGW, in Section 178 CGW defined as the work that's generated by computer when there is no human author of the work, whilst recognizing the base structure of an AI, in Section 9 Paragraph 3 it is

16 Bendert Zevenbergen et al., "Appropriateness and Feasibility of Legal Personhood for AI Systems," in *Hybrid Worlds: Societal and Ethical Challenges* (The International Conference on Robot Ethics and Standards (ICRES 2018), CLAWAR Association Ltd, UK, 2018), https://doi.org/10.13180/icres.2018.20-21.08.017.

17 Evans et al., "Truthful AI"; Yuwono Prianto, Viony Kresna Sumantri, and Paksi Yudha Sasmita, "Pros and Cons of AI Robot as a Legal Subject," in *Proceedings of the Tarumanagara International Conference on the Applications of Social Sciences and Humanities (TICASH 2019)* (Atlantis Press, 2020), https://doi.org/10.2991/assehr.k.200515.067.lying -- the use of verbal falsehoods to deceive -- is harmful. While lying has traditionally been a human affair, AI systems that make sophisticated verbal statements are becoming increasingly prevalent. This raises the question of how we should limit the harm caused by AI \"lies\" (i.e. falsehoods that are actively selected for

18 Cambridge Dictionary, "Computer-Generated," Cambridge English Dictionary, accessed June 9, 2023, https://dictionary.cambridge.org/us/dictionary/english/computer-generated.

said that (in a simpler meaning) in the case of CGW the author is the person whom arranges necessary works for the creation. Furthermore, in Section 12 Paragraph 7 explained that copyrights of the CGW expires in 50 years from the moment it was made, so it is clear that works made by AI are protected. But still according to personal rights, in Section 79 Paragraph 2(c) note that CGW has no personal rights regarding to the right being identified as author or director in Section 77, same thing happens in Section 81 which ignores the rights of derogatory treatment in Section 80 if it's CGW.[19] In other words, Copyrights Act are protecting the works of an AI yet denies the personal rights to its authorship (does not belong to AI itself).[20] In 2021, UK Supreme Court challenged by appellant Dr. Stephen Thaler talks about the patent of the inventions that was produced by an AI known as DABUS, UK Supreme Court dismissed the case within the cause that Thaler's action does not pass the requirements on the provision, nevertheless he is the owner of DABUS, that an Inventor should be recognized as a natural person meanwhile DABUS is not.[21] In simpler way to explain that Common Law systems in certain countries (and some Civil Law countries) albeit recognizes AI through CGW (or similar terms regards to the other countries), still it has no capabilities to adjudicate an AI as stand-alone entity.

Stepping into the domain of Civil Law systems, the interplay between AI's legal characterization as a subject or an object navigates labyrinthine paths of legal thought (this issue also emerge in modern common law countries).[22] Bestowing AI with legal subjectivity necessitates the meticulous reevaluation of existing legal taxonomies, potentially heralding the dawn of novel legislative structures.[23] The endeavor to incorporate AI into pre-existing categories

19 Copyrights Act 1988, c. 48. Accessed June 9, 2023, Available at: https://www.legislation.gov.uk/ukpga/1988/48/contents

20 Yuang Sun., "AI Works Protected by the Laws of the International Situation and Enlightenment," in *Advances in Social Science, Education and Humanities Research* (Paris, France: Atlantis Press, 2021).

21 Thaler v Comptroller General of Patents Trade Marks and Designs, [2021] EWCA Civ 1374.

22 Agus Raharjo, "Law as Artificial Intelligence Products," in *Proceedings of the 3rd International Conference on Globalization of Law and Local Wisdom (ICGLOW 2019)* (Proceedings of the 3rd International Conference on Globalization of Law and Local Wisdom (ICGLOW 2019), Surakarta, Indonesia: Atlantis Press, 2019), https://doi.org/10.2991/icglow-19.2019.93.

23 Dremliuga Roman and Prisekina Natalia, "Artificial Intelligence Legal Policy: Limits of

might prompt ingenious reinterpretations or even the formulation of distinct legal frameworks tailored to AI's sui generis nature.[24] This trajectory could culminate in legislations that navigate AI's rights, duties, and the intricacies of attributing liability with acuity. Conversely, casting AI as a legal object within the landscape of Civil Law retains a semblance of familiarity. This approach accentuates the normative legal relationships underpinning property, contracts, and obligations, thereby embedding AI into the continuum of pre-existing legal norms. Martsenko, in his research found that, to put AI as a legal subject is inappropriate and could bring legal uncertainty, the term electronic person in EU normative acts are unreasonable and premature for it does not give such holistic legal representation, Martsenko proposes that AI are better count as an object of law respecting the principle of proportionality that the higher the risk of harm, the higher the measure of liability.[25] Martsenko's opinion are supported by Kamyshanskiy, which suggested that AI are much more appropriate to be a legal object, and in context of law-making it is best to adopt the regulations containing peremptory norms, furthermore Kamyshanskiy proposes the necessity of an international system control the development of AI.[26] It can be concluded that in spite of the rarity of the available provisions that regulate AI, civil law system are more likely to put AI as a legal object rather than legal subject, civil law system approaches towards AI are from the side of the cause and effect in a short term just in order to bring such legal certainty in the society, but common law grasps the other end of this matter, that is the long term effect of an emerging eternal being (AI), are at least secured and develops as the issues regarding AI evolves—as in common law

Use of Some Kinds of AI," in *Proceedings of the 2019 8th International Conference on Software and Computer Applications* (ICSCA '19: 2019 8th International Conference on Software and Computer Applications, Penang Malaysia: ACM, 2019), 343–46, https://doi.org/10.1145/3316615.3316627.

24 Miltiadis Poursanidis et al., "Move-to-Data: A New Continual Learning Approach with Deep CNNs, Application for Image-Class Recognition," 2020, https://doi.org/10.48550/ARXIV.2006.07152.

25 Natalia Martsenko, "Określenie Miejsca Sztucznej Inteligencji w Prawie Cywilnym," Studia Prawnoustrojowe, no. 47 (March 20, 2020), https://doi.org/10.31648/sp.5279.

26 Vladimir Kamyshanskiy et al., "Digital Society, Artificial Intelligence and Modern Civil Law: Challenges and Perspectives," SHS Web of Conferences 109 (May 31, 2021): 01016, https://doi.org/10.1051/shsconf/202110901016.

system AI are utilized in legal disputes.[27]

In Common Law jurisdictions, considering AI as a legal subject might involve extending legal rights and responsibilities to AI entities, similar to humans or corporations. This could raise questions about AI's ability to engage in contracts and its liability for actions. Conversely, regarding AI as a legal object could place liability on its human creators, operators, or users, following established principles of product liability. In Civil Law systems, recognizing AI as a legal subject might necessitate the creation of new legal categories, requiring adjustments to existing legislation or the introduction of novel laws to define AI's rights and obligations. Alternatively, perceiving AI as a legal object could emphasize ownership and contractual aspects, integrating AI within established legal frameworks. The evolving complexity of AI's autonomy, decision-making capabilities, and potential for harm underscores the ongoing necessity for legal systems to adapt and strike a balance between accommodating technological progress and maintaining legal order. Yet, this discourse transcends the confines of legal mechanics. It is a manifestation of society's endeavor to harmonize technological prowess with ethical and legal paradigms. The synergy between innovation and tradition rests at the heart of this debate, necessitating the harmonious orchestration of diverse stakeholders – jurists, legislators, technologists, ethicists, and the public at large. As AI evolves and weaves itself deeper into the fabric of existence, the profound deliberations on its legal character will invariably mirror humanity's evolving relationship with technology, reflecting our collective aspirations, values, and vision for the future.[28]

27 Flora P. Kalalo and Kathleen C. Pontoh, "The Use of Artificial Intelligence (AI) in Legal Framework for International Arbitration Practices in Indonesia," in *Proceedings of the Arbitration and Alternative Dispute Resolution International Conference (ADRIC 2019)* (Arbitration and Alternative Dispute Resolution International Conference (ADRIC 2019), Nusa Dua, Bali, Indonesia: Atlantis Press, 2020), https://doi.org/10.2991/assehr.k.200917.002; Diana Lukitasari, Hartiwiningsih, and Jamal Wiwoho, "Building a Criminal Justice System Based on Artificial Intelligence in Indonesia:" (International Conference on Environmental and Energy Policy (ICEEP 2021), Surakarta, Central Java, Indonesia, 2021), https://doi.org/10.2991/assehr.k.211014.062; Trevor Bench-Capon, "Using Issues to Explain Legal Decisions," 2021, https://doi.org/10.48550/ARXIV.2106.14688.

28 Yunfeng Zhang, Q. Vera Liao, and Rachel K. E. Bellamy, "Effect of Confidence and Explanation on Accuracy and Trust Calibration in AI-Assisted Decision Making," in *Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency* (FAT* '20: Conference on

D. Creator Liabilities and Immunities

The question of whether an AI creator can be held liable for the actions of the AI presents a complex legal and ethical challenge at the intersection of technological innovation and legal responsibility. While the AI creator plays an integral role in designing and initializing the AI system, establishing direct culpability for the AI's actions raises intricate issues of causation, foreseeability, and accountability. From a legal perspective, liability generally adheres to human actors who possess intentionality and a capacity to comprehend the consequences of their actions.[29] AI systems, however advanced, operate based on algorithms and data patterns without possessing genuine consciousness or volition.[30] As such, traditional notions of legal culpability may not seamlessly apply to the AI creator. Nonetheless, the principle of vicarious liability in agency law could potentially be invoked, positing that an AI creator assumes some responsibility for their AI's behavior due to their role in its creation.[31] This approach, while subject to debate, seeks to establish a link between the AI's actions and the choices made by its creator in configuring its programming, training data, and parameters.

Critical examination of this issue necessitates consideration of the

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Fairness, Accountability, and Transparency, Barcelona Spain: ACM, 2020), 295–305, https://doi.org/10.1145/3351095.3372852; Eren Kurshan, Hongda Shen, and Jiahao Chen, "Towards Self-Regulating AI: Challenges and Opportunities of AI Model Governance in Financial Services," 2020, https://doi.org/10.48550/ARXIV.2010.04827; Themistoklis Tzimas, "Artificial Intelligence as Global Commons and the 'International Law Supremacy' Principle," in *Proceedings of the 10th International RAIS Conference on Social Sciences and Humanities (RAIS 2018)* (Proceedings of the 10th International RAIS Conference on Social Sciences and Humanities (RAIS 2018), Princeton, USA: Atlantis Press, 2018), https://doi.org/10.2991/rais-18.2018.13.\\uc0\\u8220{}Effect of Confidence and Explanation on Accuracy and Trust Calibration in AI-Assisted Decision Making,\\uc0\\u8221{} in {\\i{}Proceedings of the 2020 Conference on Fairness, Accountability, and Transparency} (FAT* \\uc0\\u8217{}20: Conference on Fairness, Accountability, and Transparency, Barcelona Spain: ACM, 2020

29 Peter Mahmud Marzuki, *Pengantar Ilmu Hukum*, 13th ed. (Jakarta: Prenada Media, 2021); George Whitecross Paton and David Plumley Derham, *A Textbook of Jurisprudence*, 4th ed. (New York: Oxford University Press, 1972); L.J. Apeldoorn, *Pengantar Ilmu Hukum*, trans. Sadino Oetarid, 10th ed. (Djakarta: Pradnja Paramita, 1968).

30 Olivia J. Erdélyi and Gábor Erdélyi, "The AI Liability Puzzle and a Fund-Based Work-Around," in *Proceedings of the AAAI/ACM Conference on AI, Ethics, and Society* (AIES '20: AAAI/ACM Conference on AI, Ethics, and Society, New York NY USA: ACM, 2020), 50–56, https://doi.org/10.1145/3375627.3375806.

31 Gilbert Kodilinye and Natalie Corthesy, "Vicarious Liability," in Commonwealth Caribbean Tort Law (London: Routledge, 2022), 362–406.

nature of AI's autonomy, its ability to operate independently, and the extent to which its actions can be attributed to the design choices made by its creator. It is imperative to ascertain whether the AI creator possessed the knowledge and capability to predict, prevent, or control the AI's actions that resulted in harmful outcomes. Ultimately, while holding an AI creator strictly liable for an AI's actions poses challenges within the current legal framework, there is a compelling argument to assign a degree of responsibility, particularly if a creator's negligence or deliberate choices directly contribute to an AI's harmful conduct.[32] To achieve such balance between encouraging technological advancement and establishing accountability for potential negative consequences will likely require the adaptation of existing legal paradigms or the creation of novel legal constructs tailored to the distinct features of AI systems.

Creator immunities pertain to legal provisions that shield AI creators from certain forms of liability arising from the actions of their AI systems. While these immunities may seemingly foster an environment conducive to technological advancement, they warrant careful examination in light of ethical and societal implications.[33] From a legal standpoint, the concept of "creator immunities" bears resemblance to established legal principles governing tort law, which often consider the reasonable foreseeability of harm as a pivotal factor in attributing liability.[34] However, the application of these

32 Gabriel Lima, Nina Grgić-Hlača, and Meeyoung Cha, "Blaming Humans and Machines: What Shapes People's Reactions to Algorithmic Harm," in *Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems* (CHI '23: CHI Conference on Human Factors in Computing Systems, Hamburg Germany: ACM, 2023), 1–26, https://doi.org/10.1145/3544548.3580953; Liming Zhu et al., "AI and Ethics -- Operationalising Responsible AI," 2021, https://doi.org/10.48550/ARXIV.2105.08867; Margarita Boyarskaya, Alexandra Olteanu, and Kate Crawford, "Overcoming Failures of Imagination in AI Infused System Development and Deployment," 2020, https://doi.org/10.48550/ARXIV.2011.13416.\\uc0\\u8221{} in {\\i{}Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems} (CHI \\uc0\\u8217{}23: CHI Conference on Human Factors in Computing Systems, Hamburg Germany: ACM, 2023

33 Erdélyi and Erdélyi, "The AI Liability Puzzle and a Fund-Based Work-Around"; Center for Security and Emerging Technology and Catherine Aiken, "Classifying AI Systems" (Center for Security and Emerging Technology, November 2021), https://doi.org/10.51593/20200025.

34 Janet Currie and W. Bentley MacLeod, "First Do No Harm?: Tort Reform and Birth Outcomes" (Cambridge, MA: National Bureau of Economic Research, August 2006), https://doi.org/10.3386/w12478.

principles to AI technology necessitates a recalibration to account for the inherent complexities and uncertainties associated with AI decision-making processes. Critical analysis reveals that unbridled "creator immunities" may inadvertently disincentivize the exercise of due diligence in AI development. Offering creators sweeping legal protection could obscure the accountability inherent in responsible innovation.[35] Instead of fostering an environment that encourages meticulous risk assessment and prudent design, such immunities might encourage a *laissez-faire*[36] approach to AI system creation, potentially leading to greater exposure to risks and harms.[37]

On the other hand, measured "creator immunities" could offer a balanced approach. These immunities could be structured to encourage proactive AI development while acknowledging creators' genuine efforts to ensure the ethical and safe operation of their systems. For instance, "creator immunities" could be tied to demonstrable evidence of diligent risk assessment, transparent disclosure of AI limitations, and ongoing maintenance efforts. Nevertheless, crafting "creator immunities" demands careful consideration of potential negative externalities. Immunities that excessively shield AI creators could undermine public trust, enabling the deployment of AI systems with opaque

35 Christopher Burr and David Leslie, "Ethical Assurance: A Practical Approach to the Responsible Design, Development, and Deployment of Data-Driven Technologies," 2021, https://doi.org/10.48550/ARXIV.2110.05164; Zhang, Liao, and Bellamy, "Effect of Confidence and Explanation on Accuracy and Trust Calibration in AI-Assisted Decision Making."

36 Pan Hu, Pengyu Zhang, and Deepak Ganesan, "Laissez-Faire: Fully Asymmetric Backscatter Communication," *ACM SIGCOMM Computer Communication Review* 45, no. 4 (September 22, 2015): 255–67, https://doi.org/10.1145/2829988.2787477.

37 Justin D. Weisz et al., "Toward General Design Principles for Generative AI Applications," 2023, https://doi.org/10.48550/ARXIV.2301.05578; Thomas P Quinn and Simon Coghlan, "Readying Medical Students for Medical AI: The Need to Embed AI Ethics Education," 2021, https://doi.org/10.48550/ARXIV.2109.02866.utility, and use. As generative technologies are being incorporated into mainstream applications, there is a need for guidance on how to design those applications to foster productive and safe use. Based on recent research on human-AI co-creation within the HCI and AI communities, we present a set of seven principles for the design of generative AI applications. These principles are grounded in an environment of generative variability. Six principles are focused on designing for characteristics of generative AI: multiple outcomes & imperfection; exploration & control; and mental models & explanations. In addition, we urge designers to design against potential harms that may be caused by a generative model's hazardous output, misuse, or potential for human displacement. We anticipate these principles to usefully inform design decisions made in the creation of novel human-AI applications, and we invite the community to apply, revise, and extend these principles to their own work.","DOI":"10.48550/ARXIV.2301.05578","license":"arXiv.org perpetual, non-exclusive license","note":"publisher: [object Object]\nversion: 1","source":"DOI.org (Datacite

accountability mechanisms. The legal framework should carefully define the scope of immunities to ensure that instances of intentional misconduct, gross negligence, or foreseeable harm remain within the purview of liability. Critical reflection on the societal implications of "creator immunities" is imperative, encompassing the multifaceted considerations of public welfare, ethical conduct, and the long-term trajectory of AI advancement. Striking the right balance between innovation and accountability is essential to foster a technologically progressive yet ethically responsible AI landscape. In essence, while "creator immunities" might hold potential merit in specific contexts, a measured and context-sensitive approach should be adopted to ensure the enduring equilibrium between AI innovation and societal welfare.

E. The Fittings of Legal Subject in the Auspices of Law and Its Relations with AI

The concept of the legal subject lies at the heart of legal systems, embodying the intricate web of rights, responsibilities, and capacities that individuals, entities, and even certain abstract ideas possess under the auspices of the law. In essence, the legal subject serves as the cornerstone upon which the edifice of jurisprudence is constructed, forming the nexus through which legal rights and obligations are acknowledged, contested, and administered. The notion of legal subjectivity transcends mere legalistic definitions, encompassing philosophical, social, and ethical dimensions that shape the contours of modern societies.[38] It is essential to recognize that legal subjectivity is not monolithic, rather, it varies across jurisdictions, cultures, and legal traditions, reflecting the diverse values and principles that underpin different legal systems worldwide.[39] The fittings of legal subjectivity

38 Søren Overgaard and Mads Gram Henriksen, "Alterity," in *The Oxford Handbook of Phenomenological Psychopathology*, by Søren Overgaard and Mads Gram Henriksen, ed. Giovanni Stanghellini et al. (Oxford University Press, 2019), 380–88, https://doi.org/10.1093/oxfordhb/9780198803157.013.43.

39 V. Demidov, D. Mokhorov, and A. Mokhorova*, "Forming The Legal Culture Of Technical Students In The Educational Process," 2019, 695–705, https://doi.org/10.15405/epsbs.2019.12.74; I.V. Aladyshkin et al., "Information Prospects For Socio-Cultural Development: Contradictory Grounds," 2018, 19–25, https://doi.org/10.15405/epsbs.2018.02.3; Daria Bylieva and Tatiana Nam, "Social Norms in Virtual Worlds of Computer Games," in *Proceedings of the International Conference Communicative Strategies of Information Society (CSIS 2018)* (Proceedings of the

extend beyond individual humans to encompass an array of entities, such as corporations, partnerships, and even, in certain cases, natural elements like rivers or ecosystems.[40] This expansive inclusivity underscores the adaptive nature of law to accommodate the evolving complexities of contemporary life. Moreover, the fittings of legal subjectivity extend temporally, bridging the present with the past and future through doctrines like legal personality and inheritance. The temporal dimension accentuates the continuity of legal systems and provides a mechanism for the intergenerational transmission of rights and obligations.[41]

Author wants to emphasize that AI no longer need to be considered as a legal object, AI itself are evolving every day as human and every other living being does, it is not necessary to give such legal certainty in a fast-paced manner, but to provide such certainty necessarily needs to be effective and efficient. That is why AI is best to be in position as a legal subject. A subject is defined as a person who understands something, understands something as in knowing that he or she are sane and knew that he aware nor conscious to his act, so legal subject is a person who knew that he held such responsibility to any act he performs and aware that there is law which regulate specific things which labelled forbidden.[42] It is known that AI can understand something, that AI is aware of such violations that it can do and knew that there is thing that is

International Conference Communicative Strategies of Information Society (CSIS 2018), Saint-Petersburg, Russia: Atlantis Press, 2019), https://doi.org/10.2991/csis-18.2019.75.

40 Paton and Derham, *A Textbook of Jurisprudence*; Christopher D. Stone, "Should Trees Have Standing?— Toward Legal Rights for Natural Objects," in *Environmental Rights*, ed. Steve Vanderheiden, 1st ed. (Routledge, 2017), 283–334, https://doi.org/10.4324/9781315094427-13.

41 Gordon Dahl, Andreas Ravndal Kostol, and Magne Mogstad, "Family Welfare Cultures" (Cambridge, MA: National Bureau of Economic Research, July 2013), https://doi.org/10.3386/w19237; Cathy Creswell, Peter Cooper, and Lynne Murray, "Intergenerational Transmission of Anxious Information Processing Biases," in *Information Processing Biases and Anxiety*, ed. Julie A. Hadwin and Andy P. Field, 1st ed. (Wiley, 2010), 279–95, https://doi.org/10.1002/9780470661468.ch12; Guido Governatori et al., "Variants of Temporal Defeasible Logics for Modelling Norm Modifications," in *Proceedings of the 11th International Conference on Artificial Intelligence and Law* (ICAIL07: 11th International Conference on Artificial Intelligence and Law, Stanford California: ACM, 2007), 155–59, https://doi.org/10.1145/1276318.1276347; Thorsten Beck and Ross Levine, "Legal Institutions and Financial Development" (Cambridge, MA: National Bureau of Economic Research, April 2004), https://doi.org/10.3386/w10417.

42 J. M. Balkin, "Understanding Legal Understanding: The Legal Subject and the Problem of Legal Coherence," *The Yale Law Journal 103*, no. 1 (October 1993): 105, https://doi.org/10.2307/797078.

forbidden to be done, in this specific element, AI has fulfilled the terms to be a legal subject. There are some things that need to be understood, that AI are not necessarily be given the same rights and authority as a natural legal subject, AI are considered to be special or limited legal subject. It is clear that there are no more being that can be counted as a natural legal subject aside from human, even though AI have the ability to process things almost complicated as human does, but almost is never enough, an immortal machine cannot be compared to a mortal human, at least for now. Human has human rights which are universally known and protected, but there is deviation that can be done if a person had fulfilled such requirements for his human rights to be 'revoked'. This deviation will happen when a person commits a highly forbidden thing, human rights violations (e.g., war crime, genocide, corruption recidivist, etc.).

Analogically, as human rights can be revoked from a person, then it is fair to say that AI are able to hold the role as a legal subject or at least a derivative legal subject. A derivative legal subject refers to an entity or individual whose legal attributes, rights, or obligations are intricately linked to and emanate from another primary legal subject.[43] Essentially, the derivative legal subject's legal existence and standing are contingent upon the primary subject, often resulting in a subsidiary relationship.[44] This concept is particularly observable in scenarios where legal rights, responsibilities, or liabilities extend beyond the primary subject to include related parties. For instance, subsidiary companies within a corporate structure are derivative legal subjects, deriving their legal capacity and identity from the parent company. Similarly, family members of a deceased individual might possess derivative legal rights, such as inheritance entitlements, based on their association with the primary legal subject. In essence, the notion of derivative legal subjects underscores the

43 Kadek Cahya Wibawa and Aga Natalis, "Animals Prospectus as a Legal Subject of Environmental Law In Indonesia (A Study of Ecofeminism)," in *Proceedings of The International Conference on Environmental and Technology of Law, Business and Education on Post Covid 19, ICETLAWBE 2020, 26 September 2020, Bandar Lampung, Indonesia* (Proceedings of The International Conference on Environmental and Technology of Law, Business and Education on Post Covid 19, ICETLAWBE 2020, 26 September 2020, Bandar Lampung, Indonesia, Bandar Lampung, Indonesia: EAI, 2020), https://doi.org/10.4108/eai.26-9-2020.2302557.

44 Kristen Rundle, *Revisiting the Rule of Law*, 1st ed. (Cambridge University Press, 2023), https://doi.org/10.1017/9781009000512.

intricate interconnectedness of legal relationships, where the legal status and attributes of certain entities or individuals are intertwined with their affiliation to a primary legal subject, showcasing the nuanced dynamics that define legal frameworks.

In simple terms derivative legal subject are like a legal person which bears almost all the legal personality that natural person had, in order to make them a legal subject, so giving derivative legal subject to AI is not making it in the same position as natural person, but to make it as a legal subject, which held duties and obligations.[45] Many legal practitioners has used AI as a tool to organize and even determine some cases, as an example there are courts in Canada and California which used this method[46], this use of AI in legal system are necessary to be questioned, as said in the 28th International Conference on Intelligent User Interfaces that legal decision making by using AI are based on trust, and as already known that trust is fragile and cannot be restored quickly, an experiment conducted related to this matter resulted that AI trust is indeed affected by human-like explanation, and this is very concerning.[47]

F. Legal Framework for Artificial Intelligence

The rapid proliferation of Artificial Intelligence (AI) technologies across diverse sectors has precipitated the necessity for a comprehensive legal framework that governs the intricacies of AI integration. As AI applications become increasingly ubiquitous, spanning domains such as healthcare, finance, and telecommunications, the imperative for a legally sound architecture becomes manifest. An adeptly structured legal framework for AI constitutes the bedrock for not only nurturing innovation but also facilitating accountability, thereby addressing the intricate ethical and societal considerations attendant upon the assimilation of AI into the socio-legal

45 Wen and Tong, "Analysis of the Legal Subject Status of Artificial Intelligence."

46 Maxime C. Cohen et al., "The Use of AI in Legal Systems: Determining Independent Contractor vs. Employee Status," *Artificial Intelligence and Law*, March 30, 2023, https://doi.org/10.1007/s10506-023-09353-y.

47 Patricia K. Kahr et al., "It Seems Smart, but It Acts Stupid: Development of Trust in AI Advice in a Repeated Legal Decision-Making Task," in *Proceedings of the 28th International Conference on Intelligent User Interfaces* (New York, NY, USA: ACM, 2023), 528–39, https://doi.org/10.1145/3581641.3584058.

paradigm. At the crux of the endeavor to construct a judicious legal framework lies the intricate task of harmonizing the dual imperatives of fostering innovation and upholding accountability. The inherently intricate and swiftly evolving character of AI warrants an adaptive approach that accommodates the swiftness of technological progression, whilst concurrently insulating against potential exigencies. Cardinal elements of this regulatory architecture entail the discernment of legal personality for AI entities, the elucidation of liability constructs *vis-à-vis* AI-generated actions, and the articulation of protocols governing data utilization and ownership.[48] The formulation of these tenets necessitates interdisciplinary synergy, enlisting the expertise of legal luminaries, technocrats, ethicists, and policy architects, to guarantee that the regulatory framework remains synchronous with the unfolding contours of the AI landscape.[49] One of the cardinal considerations intrinsic to the establishment of a legal framework for AI pertains to the amelioration of inherent biases and discriminatory predilections within AI algorithms, AI systems are predicated upon erudition from historical data repositories, thereby susceptible to encoding prevailing biases inherent within societal frameworks.[50] The crafting of regulations mandating transparency, accountability, and perpetual auditability of AI algorithms emerges as an exigency of cardinal consequence to ameliorate these biases and ensure the even-handedness of decision-making

48 Abdullah Altayyar, "Legal and Judicial Dealings with Artificial Intelligence as an Inventor," *Academic Journal of Research and Scientific Publishing* 4, no. 48 (April 5, 2023): 05–20, https://doi.org/10.52132/Ajrsp.en.2023.48.1; A. Feder Cooper et al., "Accountability in an Algorithmic Society: Relationality, Responsibility, and Robustness in Machine Learning," 2022, https://doi.org/10.48550/ARXIV.2202.05338.\\uc0\\u8221{} 2022, https://doi.org/10.48550/ARXIV.2202.05338.","plainCitation":"Abdullah Altayyar, "Legal and Judicial Dealings with Artificial Intelligence as an Inventor," Academic Journal of Research and Scientific Publishing 4, no. 48 (April 5, 2023

49 Maarten Buyl et al., "Tackling Algorithmic Disability Discrimination in the Hiring Process: An Ethical, Legal and Technical Analysis," in *2022 ACM Conference on Fairness, Accountability, and Transparency* (FAccT '22: 2022 ACM Conference on Fairness, Accountability, and Transparency, Seoul Republic of Korea: ACM, 2022), 1071–82, https://doi.org/10.1145/3531146.3533169; Olivia J. Erdélyi and Judy Goldsmith, "Regulating Artificial Intelligence: Proposal for a Global Solution," 2020, https://doi.org/10.48550/ARXIV.2005.11072.Legal and Technical Analysis,\\uc0\\u8221{} in {\\i{}2022 ACM Conference on Fairness, Accountability, and Transparency} (FAccT \\uc0\\u8217{}22: 2022 ACM Conference on Fairness, Accountability, and Transparency, Seoul Republic of Korea: ACM, 2022

50 Buyl et al., "Tackling Algorithmic Disability Discrimination in the Hiring Process"; Creswell, Cooper, and Murray, "Intergenerational Transmission of Anxious Information Processing Biases."

processes. Concomitantly, the regulatory schema must be adeptly calibrated to accommodate the distinct challenges occasioned by AI, embracing nuanced facets such as informed consent when interfacing with AI-derived insights and prognostications anchored in personal data.

The transnational compass of AI augments the exigency of international cooperation and standardization in the sculpting of a legal framework. The harmonization of AI regulations at the international stratum engenders the facilitation of knowledge transfer, impetus to ethical AI practices, and the curbing of a splintered regulatory domain that could encumber innovation. International organizations and fora furnish veritable platforms for nations to collaboratively surmount challenges encompassing cross-border data flows, cybersecurity, and ethical AI precepts. Through collaborative overtures, nations can coalesce around a common corpus of best practices and ethical moorings, thereby fostering a cohesive global AI milieu that accretes to the betterment of the human condition. The construction of an all-encompassing legal framework for Artificial Intelligence stands imperative to harness the latent potential of AI, while adroitly navigating its ethical, legal, and societal vicissitudes. This framework, in its adaptive construct, must encapsulate notions of liability, transparency, bias mitigation, data protection, and transnational cooperation. As AI's evolutionary trajectory endures, nation-states must interpose collaborative efforts that transcend disciplinary and geographical confines to devise a legal edifice that bequeaths succor to innovation, safeguards individual prerogatives, and espouses AI's sanguine contributions to societal amelioration.

G. Regulating AI in the Indonesian National Legal System: Challenges and Prospects

Artificial Intelligence (AI) has rapidly emerged as a transformative force across various sectors, reshaping industries, economies, and societies. In the Indonesian context, the integration of AI technologies into diverse areas of life has presented both unprecedented opportunities and complex challenges, necessitating the establishment of a comprehensive regulatory framework.

One of the primary challenges in regulating AI lies in its dynamic and rapidly evolving nature. Traditional legal frameworks often struggle to keep pace with the rapid advancements in AI technology, resulting in regulatory gaps and uncertainties. As AI systems become increasingly autonomous and capable of complex decision-making, questions surrounding liability and accountability arise. The existing legal concepts of causation and responsibility may not align seamlessly with situations involving AI, thereby necessitating the adaptation of legal norms to accommodate these technological developments.

Furthermore, the diversity of AI applications introduces a complex landscape for regulation. From autonomous vehicles to healthcare diagnostics and financial services, the regulatory framework must cater to a broad range of AI use cases.[51] Tailoring regulations to specific contexts while maintaining overarching principles poses a formidable challenge. Striking a balance between fostering innovation and safeguarding public interests requires careful consideration of sector-specific requirements, potentially leading to fragmented regulations across different industries.[52] Incorporating ethical considerations into AI regulation presents another intricate challenge. Ensuring that AI systems operate in an unbiased, transparent, and fair manner is imperative to prevent discriminatory outcomes.[53] The lack of a standardized ethical framework, however, complicates the task of defining the norms that AI

51 Vilas B. Bijwe et al., "Simulation Methodology Development for Vibration Test of Bus Body Structure Code AIS-153:2018" (Symposium on International Automotive Technology, Pune, India, 2024), 2024-26–0249, https://doi.org/10.4271/2024-26-0249; Quinn and Coghlan, "Readying Medical Students for Medical AI."tourism, and school transport. Buses are the common mode of transport all over the world. The growth in economy, the electrification of public transport, demand in shared transport, etc., is leading to a surge in the demand for buses and accelerating the overall growth of the bus industry. With the increased number of buses, the issue of safety of passengers and the crew assumes special importance. The comfort of driver and passenger in the vehicle involves the vibration performance and therefore, the structural integrity of buses is critically important. Bus safety act depicts the safety and comfort of bus operations, management of safety risks, continuous improvement in bus safety management, public confidence in the safety of bus transport, appropriate stakeholder involvement and the existence of a safety culture among bus service providers. In order to provide buses with minimal vibration resistant superstructure, CMVR- Technical Standing Committee have framed requisite guidelines on Standardization of the Bus Body. AIS-052 (Rev.1)

52 Tam Nguyen et al., "The Impact of Paradoxical Leadership on Public Sector Innovation Through Entrepreneurial Orientation and Goal Congruence," 2022, 165–74, https://doi.org/10.15439/2022M6261.

53 Creswell, Cooper, and Murray, "Intergenerational Transmission of Anxious Information Processing Biases."

systems must adhere to.[54] Additionally, the inherently interdisciplinary nature of AI ethics necessitates collaboration between legal experts, technologists, ethicists, and other stakeholders to develop comprehensive guidelines that reflect Indonesian societal values.

Prospects for regulating AI within the Indonesian National Legal System are nevertheless promising. The government has demonstrated a commitment to addressing these challenges through various initiatives, such as the establishment of the National AI Strategy (*Sekretariat Nasional Kecerdasan Artifisial Indonesia*).[55] This strategy aims to promote AI research, development, and adoption while emphasizing the importance of ethical considerations.[56] By fostering collaboration between governmental agencies, academia, and industry, Indonesia seeks to create a conducive environment for AI innovation while ensuring responsible and accountable AI deployment. The Indonesian legal system's adaptability provides a foundation for effectively regulating AI. Leveraging existing legal principles related to liability, intellectual property, and consumer protection can help address AI-specific challenges. Collaborative efforts between legal experts, technologists, and policymakers can result in the formulation of AI-specific regulations that cater to the nation's unique social, economic, and cultural contexts. Furthermore, by engaging in international discussions on AI governance and learning from global best practices, Indonesia can develop a robust regulatory framework that aligns with international standards. The regulation of AI within the Indonesian National

54 Lucas Gabriel Teixeira Da Silva and Eloize Rossi Marques Seno, "Ethics in AI: How Software Development Companies in Brazil Deal with the Ethical Implications of AI Technologies," in *Anais Do XX Encontro Nacional de Inteligência Artificial e Computacional (ENIAC 2023)* (Encontro Nacional de Inteligência Artificial e Computacional, Brasil: Sociedade Brasileira de Computação - SBC, 2023), 156–68, https://doi.org/10.5753/eniac.2023.233866; Krishna Ronanki et al., "RE-Centric Recommendations for the Development of Trustworthy(Er) Autonomous Systems," in *Proceedings of the First International Symposium on Trustworthy Autonomous Systems* (TAS '23: First International Symposium on Trustworthy Autonomous Systems, Edinburgh United Kingdom: ACM, 2023), 1–8, https://doi.org/10.1145/3597512.3599697.

55 Btari Purwaamijaya, Andrian Wijaya, and Shinta Shadani, "Perceptions and Prospective Analysis of Artificial Intelligence and Its Impact on Human Resources in the Indonesian Industry 4.0," in *Proceedings of the 1st International Conference on Sustainable Management and Innovation, ICoSMI 2020, 14-16 September 2020, Bogor, West Java, Indonesia* (1st International Conference on Sustainable Management and Innovation, ICoSMI 2020, 14-16 September 2020, Bogor, West Java, Indonesia, Bogor, Indonesia: EAI, 2021), https://doi.org/10.4108/eai.14-9-2020.2304637.

56 "Stranas AI," n.d., https://ai-innovation.id/strategi.

Legal System presents a multidimensional challenge, stemming from the technology's rapid evolution, diverse applications, and ethical considerations. However, the prospects for effective regulation are encouraging, given the government's commitment to fostering AI innovation while upholding ethical and legal standards. By embracing interdisciplinary collaboration, drawing from existing legal principles, and actively participating in international dialogues, Indonesia can position itself to harness the benefits of AI while mitigating potential risks. Through strategic and well-informed regulatory efforts, Indonesia can navigate the intricate landscape of AI and pave the way for a technologically advanced and ethically sound future.

H. Conclusion

In conclusion, the complex interaction between artificial intelligence (AI) and legal principles underscores the need to redefine traditional legal concepts for the unique AI landscape. The question of AI liability for actions such as misleading, creative output, or unethical behavior challenges existing frameworks due to AI's lack of consciousness. The principle of vicarious liability offers a potential route, holding AI creators partially responsible for AI actions influenced by their programming decisions. Determining the limitations of AI as a legal subject requires a balanced approach between technological advancement and ethical considerations. Designating AI as a derivative legal subject, distinct from natural persons, grants it responsibilities while acknowledging differences in rights. Measuring these limitations necessitates compliance with ethical and regulatory bounds, analogous to human rights revocation.

AI's rapid growth in Indonesia presents opportunities and challenges. Comprehensive regulations are needed due to its evolving nature, but traditional laws struggle to keep up, leading to uncertainty. Ensuring ethical AI is complex without standardized guidelines. Indonesia's government aims to address this through the National AI Strategy. Despite challenges, Indonesia's adaptable legal system and ethical commitment show promise for a responsible AI future.

The debate surrounding "creator liabilities and immunities" warrants careful calibration. While AI creator liability exists in specific contexts, crafting "creator immunities" demands a nuanced approach. These immunities could incentivize diligent AI development, requiring evidence of risk assessment and transparent AI limitations. However, an excessive shield may disincentivize responsible innovation, risking public trust. In conclusion, recognizing AI's capacity to comprehend, adapt, and abide by rules suggests the establishment of a derivative legal subject. This recognition requires precise calibration to respect AI's attributes while maintaining ethical standards. Striking a balance between AI innovation and societal welfare remains a priority as the legal system adapts to the evolving AI landscape.

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