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The Direction of Indonesian Criminal Law Policy in Addressing Artificial Intelligence Disruption in the Digital Era

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Abstract: The rapid advancement of Artificial Intelligence (AI) in the digital era has created significant disruptions that not only affect technological aspects but also challenge the classical constructs of Indonesian criminal law. Possessing analytical capabilities and decision-making autonomy without human psychological dimensions, AI presents normative dilemmas regarding the principle of culpability (mens rea) and legal certainty. This study aims to analyze the current legal construction of AI regulation within the Indonesian criminal law system and to formulate the future direction of an adaptive and equitable criminal law policy. Utilizing a normative legal research method, this study analyzes relevant statutes and legal policy literature. The findings reveal that current AI regulations in Indonesia remain partial, indirect, and fragmented (such as within the Electronic Information and Transactions Law), leading to normative gaps, difficulties in attributing criminal liability, algorithmic evidentiary challenges (the "black box" phenomenon), and elevated risks of AI-driven cybercrimes. The future direction of Indonesian criminal law policy must be anticipatory and progressive by establishing dedicated risk-based regulations, reconstructing criminal responsibility frameworks (including corporate and strict liability), strengthening preventive measures, enhancing law enforcement capacity, and harmonizing with international legal standards.

Keywords: Artificial Intelligence, Criminal Law Policy, Digital Disruption, Criminal Liability, Legal Policy

Abstrak: *Perkembangan Artificial Intelligence (AI) di era digital telah menciptakan disrupsi yang tidak hanya berdampak pada aspek teknologi, melainkan juga menantang konstruksi klasik hukum pidana di Indonesia. AI memiliki kemampuan analitis dan otonomi dalam mengambil keputusan tanpa dimensi psikologis manusia, sehingga menimbulkan persoalan normatif terkait asas kesalahan (mens rea) dan kepastian hukum. Penelitian ini bertujuan untuk menganalisis konstruksi pengaturan AI dalam sistem hukum pidana Indonesia saat ini serta merumuskan arah politik hukum pidana ke depan yang adaptif dan berkeadilan. Metode yang digunakan adalah pendekatan yuridis normatif dengan menganalisis berbagai regulasi terkait serta literatur politik hukum pidana. Hasil penelitian menunjukkan bahwa pengaturan AI di Indonesia saat ini masih bersifat parsial, tidak langsung, dan tersebar (seperti dalam UU ITE), yang mengakibatkan timbulnya normative gap, kesulitan penentuan*

pertanggungjawaban pidana, tantangan pembuktian algoritma (black box), serta risiko kejahatan siber berbasis AI. Arah politik hukum pidana Indonesia ke depan harus bersifat antisipatif dan progresif melalui pembentukan regulasi khusus berbasis risiko (risk-based approach), rekonstruksi konsep pertanggungjawaban pidana (seperti tanggung jawab korporasi dan strict liability), penguatan fungsi preventif, peningkatan kapasitas aparat penegak hukum, serta harmonisasi dengan standar hukum internasional.

Kata Kunci: Artificial Intelligence, Politik Hukum Pidana, Disrupsi Digital, Pertanggungjawaban Pidana, Kebijakan Hukum

INTRODUCTION

The evolution of digital technology today goes beyond merely introducing innovations; it has brought about structural changes in the fabric of society. One of the most tangible manifestations of this shift is the emergence of Artificial Intelligence (AI), which functions not only as a technological tool but has evolved into a system capable of autonomous decision-making. In this context, AI introduces a new paradigm that challenges traditional legal constructs particularly within criminal law, a field historically centered on human legal subjects as the primary perpetrators of acts (Ahmad Ramli, 2018).

This transformation gives rise to fundamental issues regarding how criminal law responds to non-human entities possessing operational capabilities akin to those of humans. Conventional criminal law is built upon the foundation of the principle of culpability (mens rea), which requires the presence of intent and consciousness as the basis for liability. In contrast, AI operates through algorithmic systems and data processing, lacking the psychological dimension inherent in humans. The disconnect between the normative constructs of criminal law and the characteristics of AI technology reveals an epistemological tension within a legal system that is not yet fully prepared to address cutting-edge technological advancements (Andi Hamzah, 2014).

On the other hand, the advent of AI also expands the spectrum of risks in social life. This technology is not merely used to enhance efficiency and productivity; it also carries the potential for misuse as a means to commit various forms of crime that are increasingly complex and difficult to trace. Phenomena such as deepfake-based information manipulation, the automation of cyberattacks, and massive data exploitation demonstrate that AI can transform into an instrument that amplifies the reach and impact of criminal activity. In this context, criminal law is required to be not only repressive but also preventive in anticipating the evolution of technology-driven crime (Dian Alan Setiawan, 2020).

Another equally important issue concerns the limitations of Indonesia's positive law in accommodating the development of Artificial Intelligence. To date, there are no regulations that specifically and comprehensively govern AI, resulting in a void within the legal system (a normative gap). This vacuum creates uncertainty regarding permissible standards of conduct, the limits of legal liability, and enforcement mechanisms for violations involving AI. In such a situation, the law risks losing its function as an instrument for ensuring certainty and protection for the public (Niken Prasetyawati, 2022).

From the perspective of criminal law policy, this situation highlights the need to redefine the direction of legal policy so that it is not merely reactive but also anticipatory. As the state's fundamental policy guiding the direction of law-making, criminal law policy must be capable of responding to technological advancements through an adaptive and progressive approach. This entails formulating new legal norms, developing relevant concepts of criminal liability, and integrating public protection with the advancement of technological innovation (Barda Nawawi Arief, 2016).

Furthermore, the future direction of criminal law policy must also consider the balance between regulatory interests and the freedom to innovate. Excessively restrictive regulations can stifle technological advancement, whereas overly permissive ones may create opportunities for the misuse of AI. Therefore, an approach grounded in risk analysis and the precautionary principle is required to ensure the law functions optimally in regulating dynamic technological developments.

Thus, Artificial Intelligence, as a phenomenon of technological disruption, has presented complex new challenges for Indonesia's criminal justice system. The legal system's lack of preparedness in responding to these developments highlights the need for a more visionary and structured direction in legal policy. Consequently, examining the direction of criminal law policy in the face of Artificial Intelligence disruption is crucial for establishing a legal framework capable of addressing contemporary challenges while ensuring legal certainty, justice, and societal benefit.

METHODS

This study employs a normative legal research method, focusing on the examination of legal norms and principles regarding criminal law policy in the context of Artificial Intelligence (AI) development in Indonesia. The approaches utilized include the statute approach to examine applicable legal provisions; the conceptual approach to analyze concepts of criminal law policy, criminal liability, and AI regulation; and the comparative law approach, where necessary, to observe AI regulatory policy developments in other jurisdictions. The legal materials consist of primary sources specifically legislation related to criminal law, information technology, and the operation of electronic systems; secondary sources such as books, scholarly journals, research findings, and expert opinions; and tertiary sources including legal dictionaries and other supporting materials. Data collection was conducted through library research, while the analysis of legal materials followed a qualitative-prescriptive method; this involved identifying and interpreting existing legal provisions, analyzing legal issues arising from AI-driven disruption, and formulating a criminal law policy direction that is both adaptive and responsive aiming to ensure legal certainty, justice, and public protection while simultaneously allowing space for technological innovation.

RESULTS AND DISCUSSION

The Construction of Artificial Intelligence Regulation within Indonesia's Criminal Justice System and the Resulting Legal Issues

The development of Artificial Intelligence (AI) as part of the digital revolution has fundamentally transformed how humans interact with technology, while simultaneously posing serious challenges to Indonesia's criminal justice system. In this context, AI is no longer viewed merely as a tool; it has evolved into a system possessing analytical capabilities and decision-making autonomy. This situation raises fundamental questions regarding how criminal law traditionally predicated on the assumption that the perpetrator of a crime is a human being can accommodate technological entities that lack both volition and consciousness (Ahmad Ramli, 2018).

From a normative standpoint, the regulation of AI within the Indonesian criminal justice system remains indirect, scattered across various statutes that govern information technology in general. A key legal instrument frequently cited in this context is the Law on Electronic Information and Transactions (UU ITE), which regulates electronic systems and digital transactions. However, these regulations do not yet explicitly address the specific characteristics of AI such as system autonomy, machine learning, and algorithmic decision-making. Consequently, a gap exists between the prevailing legal norms and the rapidly evolving technological reality (Niken Prasetyawati, 2022).

The absence of specific regulations regarding AI also gives rise to challenges in establishing the framework for criminal liability. In classical criminal law, liability is predicated on the existence of culpability (schuld) attributable to the perpetrator. This concept requires a connection between intent, action, and consequence. However, in the context of AI, this connection becomes blurred because AI systems can generate decisions autonomously, without direct human intervention. This creates a dilemma regarding who should be held accountable whether it is the developer, the operator, the user, or even the party benefiting from the system (Andi Hamzah, 2014).

This issue demonstrates that an approach to criminal liability centered on the individual is no longer adequate to address the complexities of AI technology. Consequently, there is a need to develop broader concepts of liability such as corporate-based liability or even a systemic approach that views AI as part of an ecosystem involving multiple actors. Such an approach allows for the proportional distribution of responsibility based on the respective roles of each party in the AI development and usage process (Dian Alan Setiawan, 2020).

Beyond the issue of liability, the use of AI also presents challenges regarding the legal classification of criminal offenses. AI can serve as a means to commit various forms of sophisticated crimes, such as data manipulation, algorithm-based fraud, and the dissemination of hard-to-verify misinformation. In this context, AI functions not merely as a tool but also as a factor that amplifies the perpetrator's capacity to commit crimes. However, Indonesian criminal law does not yet explicitly account for the use of advanced technology as an element that could aggravate an offense or alter its legal classification (Sigid Suseno, 2019).

Furthermore, the complex and opaque (black box) nature of AI poses serious challenges for the evidentiary process. In the criminal justice system, the presentation of evidence is a crucial element in establishing guilt. However, when a decision is generated by an algorithm that cannot be transparently explained, it becomes difficult for law enforcement officials to prove the existence of culpability. This situation creates the potential for legal uncertainty and undermines the effectiveness of criminal law enforcement (Rika Ratna Permata, 2022).

Another equally important issue concerns the protection of public rights regarding the use of AI. Data-driven AI systems have the potential to produce biased decisions if the data employed is unrepresentative or contains discriminatory elements. This can lead to injustice, particularly in the context of AI deployment within the public sector such as in law enforcement or administrative services. From this perspective, criminal law serves not merely as a repressive tool but also as an instrument for safeguarding against the potential misuse of technology.

Furthermore, the regulatory gap regarding AI highlights a legal lag in responding to technological advancements. This phenomenon often referred to as "legal lag"describes a situation where the law trails behind societal developments. In such circumstances, the law can no longer provide optimal certainty and protection, necessitating legal reform efforts that are progressive and adaptive to the changing times.

Consequently, the current regulatory framework for Artificial Intelligence within Indonesia's criminal justice system faces various limitations, spanning both normative and practical aspects. The absence of comprehensive regulations, difficulties in establishing criminal liability, and challenges regarding the burden of proof indicate that Indonesian criminal law is not yet fully prepared to address technological disruption. Therefore, legal reform is required one that is not merely reactive but also anticipatory to effectively accommodate technological advancements while ensuring optimal protection for the public.

The Future Direction of Criminal Law Policy in Indonesia in the Face of Artificial Intelligence Disruption

The rapid advancement of Artificial Intelligence (AI) necessitates the formulation of legal policies that are not merely responsive but also visionary within the framework of Indonesia's criminal law policy. Criminal law policy essentially represents the state's strategic direction regarding how criminal law is shaped, applied, and developed to achieve the goals of public protection and the administration of justice. In the context of technological disruption, criminal law policy can no longer simply react to events that have already occurred; instead, it must anticipate potential developments that may arise in the future (Barda Nawawi Arief, 2010).

One key direction to pursue is the establishment of specific regulations that comprehensively govern Artificial Intelligence. These regulations must not only provide a clear definition of AI but also address usage classifications based on risk levels, oversight mechanisms, and relevant legal liability models. A risk-based approach is essential to ensure that the regulatory framework avoids over-regulation which could stifle innovation while still providing protection against the technology's potential negative impacts (Fajar Sugianto, 2022).

Furthermore, future criminal law policy needs to move towards reconstructing the concept of criminal liability to make it more adaptable to technological advancements. In this regard, an approach focused solely on the individual as the perpetrator is no longer sufficient. It is necessary to develop broader concepts of liability such as corporate liability, strict liability, and system-based approaches that account for the involvement of various parties within the AI ecosystem. Such approaches enable a fairer and more proportional distribution of responsibility, aligned with the respective roles of each party in the development and use of the technology (Eddy O.S. Hiariej, 2016).

Furthermore, the direction of criminal law policy must emphasize strengthening preventive measures to combat Artificial Intelligence-based crime. Criminal law serves not only as a repressive tool for punishing offenders but also as an instrument for preventing crime. In this context, preventive measures can be implemented through the establishment of ethical standards for AI development, the oversight of technology usage, and the enhancement of public digital literacy. This preventive approach is crucial, given that technology-based crimes tend to be difficult to detect and often have far-reaching consequences (Yudi Kristiana, 2020).

Furthermore, criminal law policy in Indonesia must also take into account the global dimensions of Artificial Intelligence developments. Crimes involving AI are often transnational in nature, thereby necessitating international cooperation to address them. Consequently, Indonesia needs to adopt international standards and collaborate with other nations on law enforcement regarding technology-based crimes. Such legal harmonization is crucial for establishing a legal system compatible with global developments and enhancing the effectiveness of law enforcement (Roni Wiyanto, 2019).

Beyond regulatory and law enforcement aspects, the future direction of criminal law policy must also be supported by capacity building for human resources, particularly law enforcement officials. A solid understanding of Artificial Intelligence technology is essential for law enforcement personnel to effectively handle cases involving such technology. Without this capacity building, even well-crafted regulations cannot be optimally implemented in practice (Lilik Mulyadi, 2021).

On the other hand, the formulation of criminal law policy regarding AI regulation must remain grounded in fundamental legal principles: legal certainty, justice, and utility. These three principles must be balanced within every policy adopted, ensuring that the law not only provides certainty but also reflects a sense of justice and delivers benefits to society. In this

context, an overly repressive approach should be avoided, as it could stifle the innovation and technological advancement that hold significant potential for enhancing public welfare.

Consequently, the direction of criminal law policy in Indonesia regarding the disruption caused by Artificial Intelligence must be comprehensive, adaptive, and future-oriented. Criminal law reform entails not only the enactment of new regulations but also the development of liability concepts, the strengthening of preventive measures, the enhancement of law enforcement capacity, and harmonization with international law. Through such an integrated approach, it is expected that Indonesia's criminal law will be capable of addressing the challenges posed by technological advancements while providing optimal protection for the public in the digital era.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion

1. The development of Artificial Intelligence, as part of the disruption caused by digital technology, has had significant implications for Indonesia's criminal justice system. Under the current legal framework, regulations concerning AI remain fragmented and lack a comprehensive legal basis. This situation gives rise to various legal issues most notably regarding the absence of specific legal norms, difficulties in establishing criminal liability, and challenges in the evidentiary process for crimes involving AI technology. Furthermore, the autonomous and algorithm-based nature of AI challenges classical criminal law concepts which have traditionally focused on individual culpability (mens rea) thereby necessitating a new approach that is more adaptable to technological advancements.
2. On the other hand, the future direction of criminal law policy in Indonesia regarding the disruption caused by Artificial Intelligence must prioritize comprehensive, adaptive, and responsive legal reform. Establishing specific regulations for AI is an urgent necessity to ensure legal certainty and public protection. Furthermore, it is essential to reconstruct the concept of criminal liability to accommodate the involvement of various stakeholders within the AI ecosystem, strengthen preventive measures against technology-based crime, and enhance the capacity of law enforcement agencies. In this way, criminal law is expected to function optimally in regulating and managing technological advancements without stifling innovations that benefit society.

Recommendations

1. Based on the foregoing, concrete action is required from the government and lawmakers to promptly formulate specific regulations that comprehensively govern Artificial Intelligence, particularly from the perspective of criminal law. Such regulations must address the issue of regulatory gaps, provide clarity regarding legal liability, and establish proportionate limits on AI usage to prevent misuse.
2. Furthermore, law enforcement agencies need to enhance their capacity and understanding regarding the evolution of Artificial Intelligence technology through continuous education and training. This is crucial to ensure that law enforcement operations are effective and capable of keeping pace with the complexities of technology-driven crime. Additionally, raising public awareness and digital literacy is essential as a preventive measure against the misuse of AI in the digital era.

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