



## ECOLOGICAL DYNAMICS OF LOCAL PUBLIC ADMINISTRATION AGAINST GLOBAL TECHNOLOGICAL PRESSURES: GROK AI ON PLATFORM X

**Diva Indah Cahyani**

Gunung Jati Swadaya University, Indonesia, diva.123090062@ugj.ac.id

**Ardiva Dwilesty Nabila**

Gunung Jati Swadaya University, Indonesia, diva.123090062@ugj.ac.id

**Dini Januariska**

Gunung Jati Swadaya University, Indonesia, ardiva.123090063@ugj.ac.id

**Aini Apriyani**

Gunung Jati Swadaya University, Indonesia, aini.123090076@ugj.ac.id

### Abstract

The development of global artificial intelligence (AI) technology has had a significant impact on social and legal dynamics in Indonesia, one of which is through the use of Grok AI on the X platform (Twitter). This study aims to analyze the interaction between global AI technology and socio-political factors within the ecological framework of Indonesian public administration and examine the implications of the absence of specific AI regulations on the protection of people's digital dignity. The research method used is qualitative descriptive with a case study approach, through direct observation of user activities on platform X and documentation studies of regulations and related literature. The results of the study show that the absence of preventive AI regulations causes the abuse of Grok AI in the form of digital-based sexual harassment and visual manipulation without consent, thus causing ecological disturbances in the Indonesian public administration system. Government responses that tend to be reactive-adaptive, such as the temporary termination of access to Grok AI, reflect the limitations of the legal instruments available. This study concludes that it is necessary to update or establish AI regulations that are specific, binding, and preventive-oriented in order to protect the digital dignity of society and maintain the balance of the digital ecosystem in the midst of global technological pressures.

**Keywords:** public administration, Grok AI, artificial intelligence, digital dignity, AI regulation.

### A. Introduction

Globalization has brought the whole world to very rapid technological development, one of which is through the

presence of artificial intelligence (AI) which is now widely used in various aspects of the lives of global people, including Indonesia. Grok is one of the AIs available on Platform



X (Twitter) and is designed to help answer questions, solve problems, and provide ideas. However, this technology then became a hot topic due to abuse, especially among Indonesian netizens.

One form of such abuse is digital-based sexual harassment, which is the provision of indecent commands to AI on random photos uploaded on Platform X without the permission of the photo owner. This practice falls into the category of digital-based sexual harassment crimes because it involves objectification of the body, invasion of privacy, and visual exploitation without consent. This phenomenon causes fear and insecurity in the public to upload personal photos on social media.

This problem also reveals the existence of a vacuum of accountability in the ecology

of public administration. When citizens' digital identities are manipulated by global technologies like Grok AI, local bureaucracies are often stuck in a reactive attitude because they don't have legal instruments capable of reaching across cross-border platforms.

As found in the research conducted by the Philippines, the development of technology has led to the emergence of artificial products (AI) such as deepfakes, which have caused problems of manipulating photos and videos to contain pornographic content.<sup>1</sup> This study has mentioned the need for new regulations or updates to existing regulations to limit the use of AI such as deepfakes with the aim of preventing more complex problems from occurring. The research by By stated that to handle cases of

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<sup>1</sup> Seveney et al., "The Urgency of Regulation Against the Abuse of AI-Based Deepfakes (Artificial Intelligence) in Pornographic Content", Journal of

Discipline: Academic Community Magazine of the College of Law Youth Pledge Vol.31 No. 2, May 2025, pp. 97-106.



deepfake (AI) abuse, Indonesia can actually use several legal instruments such as the ITE Law, the Pornography Law, the PDP Law, and the new Criminal Code as a basis for updating specific regulations regarding the use of AI as an effort to handle deepfake abuse cases.<sup>2</sup> Click or tap here to enter text.<sup>2</sup> However, according to him, the current existing law is still general and does not explicitly regulate photo manipulation using AI technology, so new preventive regulations are still needed as a barrier for AI users.,<sup>3</sup>

Judging from previous research, most of the research discussed AI-based media manipulation and suggested regulatory reforms to protect people's personal data. Likewise with the use of the Grok AI chatbot created by Elon Musk on platform X, there

are no specific regulations as guidelines for the use of AI to prevent behavior that violates boundaries and harms a party.

In this study, the author hopes that there will be preventive regulatory reforms from the government to prevent the next victims and restore public trust in using social media.

Therefore, this research will fill the void from previous researchers by proposing updates or new regulations that focus on preventive models in the ecology of Indonesian public administration amid global technological pressure on the X platform (Twitter).

## B. Problem Statement

1. What is the interaction between the global technology environment (Grok AI) and socio-political factors

<sup>2</sup> Rohmawati et al., "The Urgency of Deepfake Abuse Regulation as Legal Protection for Victims of Online Gender-Based Violence (KBGO)", *Journal of Social Science Research* Vol. 4 No. 6, December 2024, pp.3239-3254.

<sup>3</sup> Maulia & Wiraguna, "AI-Based Photo Misuse and Legal Challenges Based on Law No. 27 of 2022 on Personal Data Protection", *Journal of Law and Citizenship* Vol. 12 No. 3, May 2025, pp. 61-70.



in the ecology of Indonesian public administration to the phenomenon of content abuse on platform X?

2. How does the absence of specific AI regulations affect the protection of people's digital dignity?

### C. Research Objectives

The purpose of this study is to analyze the ecological dynamics of local public administration to the global pressure of AI technology and to examine the implications of the absence of AI regulation on the protection of the security and digital dignity of the community.

### D. Research Methods

This study uses a descriptive qualitative method with a case study approach. According to , the purpose of the case study research approach is to reveal or

describe the characteristics of an individual, a group, and so on. Case studies also place emphasis on analyzing a case using only a small number of events, events or phenomena in a study. (Ilhami et al., 2024)<sup>4</sup> In this case study, researchers analyzed through direct observation on platform X by collecting evidence of user posts and comments.

Sample data is categorized into primary data and secondary data. According to Click or tap here to enter text., primary data is data obtained directly from the original source by the researcher. This data is *first-hand* and specific to the purpose of the research being conducted.<sup>5</sup> Primary data is obtained through observation of user activities on platform X. Secondary data is data collected by other parties or certain institutions for different purposes but can be reused by researchers to

<sup>4</sup> Ilhami et al., 2024 , "Application of Case Study Methods in Qualitative Research", Journal Article Vol. 10 No. 9, May 2024, pp. 462-469.

<sup>5</sup> Coding Studio Team, "What are Data Analysis Techniques?", codingstudio.id, February 2023.



support their research<sup>6</sup>, through documentation studies that include academic studies, laws and regulations (such as the ITE Law and the PDP Law), as well as relevant online media reports. The researcher analyzed the data inductively by placing the phenomenon of AI abuse in the framework of Public Administration Ecology. This approach aims to find out how environmental factors of digital technology affect social dynamics and the extent to which the public administration/regulatory system is able to respond to these technological disruptions.

### **E. Research Results and Discussion**

Based on the researcher's observations of the official policy of the X platform and the public documentation provided by xAI, Grok which is a generative artificial intelligence chatbot was developed by xAI and integrated directly into the X

platform as a large language model-based assistant (LLM). According to , grok is designed to provide conversational responses, analytics, and content generation capabilities that are contextual and real-time by leveraging the data circulating on platform X.<sup>7</sup> However, in the policy document available on the help page and terms of service X, the researcher is aware of the absence of specific regulations that explicitly and separately explain the limitations on the use of Grok. The provisions available refer to the general content policy of platform X, which regulates the prohibition of certain content such as pornography, violence, and privacy violations, without specifically linking it to the working mechanisms, responsibilities, or potential risks posed by Grok AI. Therefore, the regulation of Grok is indirect and depends on the rules of the

<sup>6</sup> Coding Studio Team, "What are Data Analysis Techniques?", codingstudio.id, February 2023.

<sup>7</sup> X's official website, 2026



platform in general, so it has not been able to function as a preventive instrument that specifically limits and anticipates the abuse of artificial intelligence.

This has a direct impact on the position and capacity of local public administrations, when the abuse of Grok AI does occur. Just as Platform X does not provide preventive rules, local public administrations also do not have rules that specifically limit the use of AI.

The interaction between uncontrolled global technology and the local social environment in Indonesia through the X grok AI platform has created real ecological tensions. Based on the direct findings from platform X in January 2026, researchers identified that there was a shift in destructive and defensive social behavior.

First, there is behavior that normalizes the use of grok ai as a tool to create harassing content in the digital space, such as the @gn and @tsy accounts that instruct Grok AI to manipulate indecent photos against c\*\*\*\*\*m selfie uploads, Comments on the post have also reached 4.7k impressions, which shows that this destructive content has a rapid spread in a short period of time. stating that The abuse of Grok ai has great potential and real challenges from generative AI. On the one hand, this technology presents the innovation of human-machine interaction. On the other hand, without strong regulation and ethics, AI risks becoming a tool for violations of human privacy and dignity.<sup>8</sup>

Second, the abuse of grok ai from the @P\*\*\*\*\*T\*\*\*\* account that told grok ai to

<sup>8</sup> Amurti, skirt AI and the Risk of Immoral Content: Ethical and Privacy Challenges in the Age of Artificial Intelligence Article titled "Grok AI and the Risk of

Immoral Content: Ethical and Privacy Challenges in the Age of Artificial Intelligence", People's Mind, January 2025.



make indecent photo changes to one of the public figures emphasizes that there is global technological pressure on the social environment. In the ecological perspective of administration is an environmental disturbance, The inability of platform X to provide preventive instruments forces the system to develop a set of adaptive strategies in response to complex and rapidly changing ecological dynamics.<sup>9</sup> This requires curative and regulatory action from national authorities to maintain the balance of the digital ecosystem and protect civil rights from the threat of global algorithms that are cross-border.

As a manifestation of adaptive strategies in the ecology of public administration, the Indonesian government has made formal interventions against

disruptive global technological pressures. It is recorded that the Ministry of Communication and Digital (Komdigi) officially temporarily terminated access to the Grok AI feature on January 10, 2026.<sup>10</sup> This administrative action was taken as an emergency measure to mitigate the risk of spreading *immoral deepfake content* that has disturbed the public, using the legal basis of the Regulation of the Minister of Communication and Informatics Number 5 of 2020 concerning Private Scope Electronic System Operators (PSE). Theoretically, this step reflects the dynamics of ecological calibration; where the bureaucratic system is forced to exercise policy discretion through existing legal instruments to fill the gap in AI regulations that are specific and preventive.

<sup>9</sup> Siswoyo & Nursahidin, Ecology of Public Administration Reciprocal Dynamics of Public Administration and Ecological Factors, First Edition, UGJ PRESS, Cirebon, 2025, p. 219.)

<sup>10</sup> Bulandary, ABUSE OF GROK AI FOR IMMORAL CONTENT, Issue of the Week, January 2026)



This dynamic is further emphasized by the role of Commission I of the House of Representatives of the Republic of Indonesia which carries out a strict supervisory function by urging the government not to be passive towards platform X. The interaction between legislative institutions that absorb public aspirations and ministries that execute policies shows that in the ecology of Indonesian public administration, administrative decisions are often reactive-adaptive. This means that the state administrative system tends to only intervene after a massive "environmental disturbance" in the digital space. While this termination of access has been successful in providing instant protection, it also reveals the *blind spot* of our administration, namely the reliance on curative measures due to the slow

development of comprehensive AI regulations at the legislative level.

According to the absence of special regulations handling AI cases, the law enforcement process against AI abusers in Indonesia is weak and creates ambiguity in determining the guilty parties<sup>11</sup> In Indonesia, the current regulation still prioritizes the principle of innovation and the use of AI technology by providing an Artificial Intelligence Ethics Guide<sup>12</sup> because this regulation is still ethical and has not entered the realm of binding law so that this creates a gap and is used by global platforms such as X AI. According to this, it is a serious threat. As a result, the X AI platform can operate the Grok AI feature without legal regulation with a security and preventive system making the dignity of the community fragile because the

<sup>11</sup> Nugraha, "ARTIFICIAL INTELLIGENCE (AI) REGULATORY GAP IN INDONESIA: TECHNOLOGY IS BOOMING, LAWS ARE IN PLACE", *Invention*, July 2025

<sup>12</sup> Press Release, Deputy Minister Nezar Patria: Preparation of AI Regulations Prioritizes Innovation Principles, [komdigi.go.id](http://komdigi.go.id), October 2024)



state is only able to provide a curative response rather than preventive measures that can systemically stem the misuse of global algorithms.<sup>13</sup>

The absence of specific regulations on Artificial Intelligence (AI) in Indonesia creates a significant legal gap in the protection of people's digital dignity. This is crucial considering that technologies like Grok AI on platform X operate in a strict regulatory vacuum, making them vulnerable to data abuse. In this regard, the Minister of Communication and Information of the Republic of Indonesia, Budi Arie Setiadi, emphasized that AI system operators are obliged to "pay attention to humanistic values to maintain safety, protection of human rights, and human dignity in the use of AI."

However, the nature of the circular letter which is only an ethical guide causes the protection to not yet have the force of legal force (*legally binding*).<sup>14</sup> In line with this, it states that the use of AI must be based on the principle of "accountability and respect for human values in order to prevent negative impacts that are detrimental to the dignity of the nation."<sup>15</sup> Thus, the absence of concrete regulations results in the blurring of legal responsibility on the part of global technology developers, which ultimately leaves the digital dignity of individuals in a vulnerable condition without a clear and definite rights restoration mechanism.

## F. Conclusion

The interaction between global technology (Grok AI) and the ecology of

<sup>13</sup> Arbani, "Artificial Intelligence Legal Vacuum in Indonesia: Threats & Challenges Read CNBC article Indonesia Vacancy Artificial Intelligence Law in Indonesia: Threats & Challenges" 2025)

<sup>14</sup> MINISTER OF COMMUNICATION AND INFORMATION OF THE REPUBLIC OF INDONESIA, December 2023)

<sup>15</sup> Agency for the Assessment and Application of Technology (BPPT), July 2020



Indonesia's public administration is currently at a real ecological tension. The presence of Grok AI on platform X has become an environmental nuisance as done by @gn and @tsy accounts that carry out digital abuse through photo manipulation. The Indonesian government finally reactively blocked it temporarily on January 10, 2026 through Perkominfo No. 5 of 2020. This action shows that our government is still reactive, i.e. only taking action when a problem has occurred.

The absence of specific AI regulations in Indonesia has an impact, namely a legal vacuum that weakens the protection of people's digital human rights. Although there is already a guide in the form of a Circular Letter of the Minister of Communication and Information Number 9 of 2023, this instrument does not have legal coercion (sanctions), so global platforms such as X and Grok AI can operate without strict supervision. This makes people's digital

human rights, which include the right to privacy, self-identity, and protection from manipulative content, particularly vulnerable to algorithmic exploitation. Without adequate legislation, the accountability of technology providers becomes immeasurable, and society becomes deprived of a definite legal mechanism to demand justice for violations committed by AI systems.

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