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Legal Protection for Online Healthcare Patients: Risks and Challenges in the Digital Era

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Abstract

The rise of online healthcare services presents significant legal challenges. This research examines how legal protection for patients is provided, the risks and obstacles in safeguarding patients in the digital era, and how health law should adapt to technological developments. Using a normative legal research method, the study highlights that legal protection is essential to ensure patients' rights in rapidly evolving digital healthcare. Drawing on Philipus M. Hadjon's theory, both preventive and repressive protections must work synergistically within regulations governing online healthcare. While digital services offer benefits such as faster and easier access, they also pose risks. Key issues include the absence of clear telemedicine regulations, potential misuse of personal data, limited service quality standards, and weak supervision. Dispute resolution between patients and providers further complicates protection. Health law must evolve to address these challenges, ensuring adequate safeguards while maintaining fairness and quality. Legal adaptation should regulate telemedicine practices, uphold ethical and professional standards for medical personnel, and protect patient data from misuse or breaches. Reputation and trust in healthcare depend on balancing innovation with the protection of fundamental rights. Therefore, health law must establish an adaptive and responsive framework that integrates technological progress with patient protection. Such a framework should guarantee ethical conduct, transparency, and accountability in digital healthcare, enabling the sector to grow safely and fairly. Ultimately, protecting patients' rights while embracing innovation is crucial for building trust and legitimacy in healthcare services in the digital era.

Keywords: legal protection, patients, healthcare, digital era

INTRODUCTION

In the current digital era, healthcare services in Indonesia have entered a phase of electronic adoption that includes telemedicine services, medical records, health applications, and the use of technology to improve diagnosis and facility management (hospitals, health clinics, etc.). Currently, in Indonesia, there is the Halodoc application that functions as an online health reference that is widely used by the Indonesian public. The main facilities provided by Halodoc include consultations with doctors (via chat, voice calls, or video), a Health Shop for purchasing medicines and health products, and Homecare (including lab tests and vaccinations at home). The government has also shown its visible support through a program to procure internet infrastructure for healthcare facilities and the establishment of a Digital Transformation Office (DTO) at the Ministry of Health. The purpose of establishing this DTO is to accelerate the adoption of technology in healthcare services (Adinda, 2024).

Healthcare service is among the important factors that influence the degree of public health. The regulation of

Indonesia's healthcare service, philosophically, is rooted in Chapter 34 section (1) of the 1945 Constitution (UUD), the 4th amendment, stating that healthcare services are the state's responsibility, and Chapter 28 H section (1) that decrees the right of every citizen to receive healthcare services. Both chapters are the manifestation of Indonesia's moral principle (*sila*) of "just and civilized humanity" and "social justice for the people of Indonesia." The provision of healthcare services is highly related to the value of human dignity, whereas the establishment of rights to receive healthcare services is the manifestation of *sila*, "social justice for the people of Indonesia," to achieve equality.

As a developing country, Indonesia is still fighting for an adequate quality of healthcare for its people. According to the Human Development Growth Index of 2010, Indonesia is ranked 111. Ratio of physicians to citizens is at 1 to 5000, significantly behind Malaysia, with 1 to 700. This issue is caused by the considerable interest of Indonesians in receiving medical care overseas instead of locally, indicating a considerably low trust among Indonesians toward local physicians. In his article, Anwar quoted the statement of the head of IDI, which is that nearly one million Indonesians seek medical treatment overseas, and around IDR 20 trillion is spent annually. For that, the state needs to keep up with the advancement of informatics in healthcare services to compete with other countries that are capable of utilizing such technology to provide long-distance healthcare service (telemedicine) and even long-distance surgery (telesurgery).

Technology of information is not something difficult to reach nowadays because it has now penetrated every aspect of daily life. Such technology is ever-innovating as well as ever-advancing, and the advancements could provide public convenience. The convenience is also felt within the scope of the economy, particularly in trading. At this point, trading is inseparable from informatics. The synergy of trading and informatics gave birth to the term e-commerce. The advancement of online healthcare consulting firms provides several benefits. In terms of practicality, online consulting eases patients to interact with doctors virtually anywhere without the need to be physically present in a medical facility. Patients only need to possess communication tools connected to the internet to be able to consult with doctors. This obviously provides significant help to those living in places with minimal infrastructure as well as inadequate healthcare facilities. Moreover, patients with physical limitations will be able to consult without needing to leave home or even bed.

Online applications providing healthcare consultations have been among the trends that were born from the advancement of informatics. Alodokter and Halodoc are among the many online applications recognized in Indonesia. Online health consultation is supported by physicians with medical backgrounds who provide the ability to analyse and provide a diagnosis to patients. However, it is undeniable that the existence of online consulting applications does not come without issues. Among the more serious issues would be an occasional irrelevance of medical information produced, which in turn will decrease the quality of service and ultimately the patient's trust. According to reports from Indonesia's Ministry of Health, during 2023, more than 10 million Indonesians have utilized telemedicine applications to gain health consultation services; moreover, an annual growth of up to 20-25% was expected from the sector of digital health within the next 5 years. Even with these positive numbers, legal issues within such applications are not few, from issues of personal information protection to professional responsibilities of medical personnel providing virtual services. One of the most relevant legal issues related to online healthcare services is the void of jurisdiction in regulating such online services. Even with several health-related regulations, such as Constitution No.17, 2023 of alteration of Constitution No.36, 2009 of health and Constitution No.1, 2024 of the alteration of Constitution No.11, 2008, of Information and Electronic Transactions (ITE), these regulations have not specifically controlled legal protection for patients in the context of online healthcare service. This causes vagueness in patients' rights, responsibilities of service providers, as well as legal procedures that need to be taken should a dispute occurs. This void of jurisdiction opens up a pathway to potential abuse and injustice towards patients in terms of

personal information, quality of service, and responsibilities of medical personnel.

The use of online healthcare services gives a rise to several legal issues and ethical concerns, such as licensing, accreditation, privacy of medical information, and even accountability for malpractices. Some ethical challenges are comprised of limited patients' information, as well as disparities of expectations and confidentiality. Data leakage risk is on the rise due to third-party access, such as internet providers, technicians, and even hackers, who are able to gain medical information without the knowledge of physicians and patients alike.

Online healthcare services not only bring benefits but also come with their own negative outcomes, such as medical record confidentiality that is not adequately secured, as well as the risk of misdiagnosis from the lack of face-to-face meetings in which physicians are supposed to be accountable even for such mistakes. This condition generates serious medicolegal issues. Therefore, a clear regulation within the national law is mandatory in order to ensure legal assurance and the protection of patients' rights amidst the advancement of medical technology. Leaving this issue to drag on will negatively impact healthcare services, which in turn will harm the public as a whole. It is of everyone's knowledge that a doctor is ultimately a human, prone to mistakes and neglect. Therefore, ethics violations or even breaches of legal norms are not an impossibility. This research is of high significance because it can contribute to the comprehension of legal protection for patients within digital healthcare services that are ever-advancing. Highlighting the existing void of jurisdiction, this research may provide recommendations for a more comprehensive update towards existing regulations in line with the technology progression, so as to provide optimal protection for patients.

This research holds a significant novelty for it covers the rarely explored legal aspect, which is the aspect of online healthcare service, particularly in Indonesia. This research will also identify and analyse the existing void of jurisdiction within the regulation of digital healthcare, as well as offer more concrete legal solutions relevant to the advancement of technology. This research is of high importance to be studied further, given the increasing number of people using online healthcare services and the potential they hold to become the primary choice in the future. The existence of this research is expected to bring a deeper understanding of legal protection for patients, as well as to stimulate the development of clearer and more precise guidelines in order to protect patients' rights and ensure the safety and trustworthiness of online healthcare services.

Based on the previous introduction, several research probes are to be elaborated, such as: (1) How do legal protections work for patients of online healthcare services? (20) What are the risks and challenges to be faced in providing legal protection for patients of healthcare services in a digital era? (3) How is the medicolegal system supposed to adapt to the advancement of digital technology?

Theoretical Framework

Theorem of Health Law

The health law, including the "*lex specialist*" constitution, protects the responsibility of healthcare providers to achieve the common goal of "health for everyone" within the framework of human healthcare, as well as providing special protection for patients seeking healthcare services.10 The aforementioned constitution regulates the rights and responsibilities of every healthcare provider as well as users, an individual (a patient) or a group of people. According to H.J.J. Lennen, the health law covers all legal clauses that are directly related to health care, as well as the implementation of civil law, legal administration of the state, and criminal law within this context. As a result, the health law can be defined as a total series of regulations that cover health-related issues. Sources of such regulations include contract of jurisprudence, consensus, and notions of legal and medical experts, aside from textual constitutions (including doctrines).

The Indonesian Congress of Health law in its primary budgeting states that "The health law is any legal clause

directly related to the maintenance or service of healthcare and its implementation as well as the rights and responsibilities of an individual and the entirety of the public as recipients of healthcare service as well as providers of healthcare in every single aspect within the organization; national and international guideline vehicle, laws in medical field, jurisprudences, as well as science within medical field and health. The medical law is part of health law related to medical care." In essence, the purpose of law is to produce public order and balance. Then, in order to achieve a well-functioning society, human well-being must be preserved. With that, it is noticeable that the purpose of a health constitution isn't far apart from the general purpose of a constitution as a whole. This is observable through the lens of the healthcare sector, which covers the dimensions of both social and communal, and is required to accommodate various interests. Recalling the first purpose of the law, which is to create order, healthcare sectors have held legal frameworks to carry out their duties accordingly.

This is achievable if legal clauses are implemented accordingly, which in turn fosters understanding between professionals within every department that supports the enactment of healthcare operations. The existing legal authority has pictured the responsibilities and rights of each professional actor. Therefore, it is hoped that order and balance will be achieved in the implementation of the rights and responsibilities of each profession. There are various theories applicable to gain a considerable comprehension of the purpose of law as well as achievements within the healthcare sector. Ethics and jurisdictions within healthcare service are highly important for medical personnel in order to understand their ethics, morals, and the regulations, as well as their implementation in their study, and in performing their duties within healthcare facilities. The medical personnel will be prevented from charges of ethics, morals, and even legal violations should they operate according to the rules of ethics, morals, and the law itself. With that, within a healthcare service, a doctor, dentist, nurse, or even a tocologist needs to make the correct decision. Any action performed is according to each field of competence, standard of care, and authority based on the principles of ethics, morals, and law.

Ethics as moral philosophy is related to what is considered good and bad by the people within a certain timeframe, according to shifts and growth of norms and values within the aforementioned society. It is specifically stated "of a certain timeframe" because ethics and morals are subject to change as time passes. Actions that are done according to the existing ethics and morals will be praised, but as a consequence, any action violating said norms will be denounced. Compared to the rule of law, the rule of ethics holds an obligation for each person within its scope, and should it not be implemented, it will entail repercussions as a consequence. Whereas in the rule of law, an obligation is treated as a mandatory requirement to materialize the right that comes with it. This will lead to a punishment should it not be fulfilled. Therefore, obligations become an enforcement tool to carry out one's burden. In the present globalization, ethical rules need to be preserved, for without them and the law, one man becomes another man's adversary. The field of healthcare service needs to be firmly held by ethics and law as a consequence of humans' potential for greed, which in turn will lead to conflicts between patients and providers or even among fellow providers. Without the aforementioned rules holding the leash, one party might be willing to do whatever it takes in order to achieve its own interest, even at the expense of the other.

Theory of Legal Protection
Legal protection is defined as providing protection to one's human rights from violations by other people. Such protection is bestowed upon the public so that they can benefit from every right given by the law, or in other words, legal protection is a series of legal efforts that need to be done by law enforcers to provide a sense of security, both physical and in mind, from various threats from any party.

According to Muchsin, legal protection is an action to protect an individual by harmonizing between rules and values toward one's actions, to create order and civil interaction between fellow humans. On the other hand,

according to Setiono, legal protection is an action or effort to protect society from the arbitrary actions of those in power to manifest order and peace, to enable the people to enjoy their dignity as humans.

According to Hetty Hasanah, legal protection means any effort that ensures legal certainty, and thus is able to provide legal protection towards related parties or those performing legal actions. Fitzgerald explained Salmond's theory of legal protection, in which its purpose is to integrate and coordinate various interests within a society, for within the traffic of interests, a protection to one interest can only be done by restricting another one. Legal protection is required to view the steps in which legal protection is born from legal provisions, and all legal regulations enacted by the people are, in essence, a public agreement in order to regulate relations and interactions among the members or between an individual and a governmental body that represents the people's interest.

According to the notion of Phillipus M. Hadjon, legal protection for the people is among the governmental acts that are both preventive and repressive in nature. Preventive legal protection serves the purpose of preventing disputes, which leads the government to act cautiously in decision-making based on discretion; on the other hand, the repressive kind of legal protection solves disputes, including how they are handled in a judicial institution.

This research is a normative legal research focusing on the study of the currently applied legal norms, such as those stated in the statutory law, legal doctrine, related to legal protection for patients of online healthcare service: analysis towards risks and challenges of healthcare services in a digital era. To answer the primary issue in this research, the writer employs the qualitative approach as the research method so as to descriptively elaborate, as explained by Bogdan and Taylor, quoted by Lexy Moleong, that the qualitative method as a research procedure produces descriptive data comprised of written or verbal statements from the observed group of people. This approach is directed to both the individuals and their backgrounds holistically.

A descriptive method in research is utilized to provide an objective and subjective picture explaining an event or phenomenon by presenting data of factual value, which in turn results in a detailed conclusion to an issue, event, or phenomenon as the subject of research. Within this thesis, the writer endeavors to elaborate on subjects related to legal protection for patients of online healthcare services: analysis of risks and challenges of healthcare services in a digital era.

DISCUSSION
Legal Protection for Patients of Online Healthcare Services

Health is one of the indicators of social well-being, and plays an important role in improving the quality of manpower, management development, and poverty within Indonesia. A healthy individual will make an impact on the performance of the aforementioned individual. The health quality of people is, among the many factors, determined by the quality of healthcare service, either from the availability of healthcare facilities or an adequate amount of medical staff. Healthcare service becomes a primary factor in achieving the physical and psychological well-being of the people. Therefore, the Indonesian government continues its effort to improve the quality of healthcare services in terms of the distribution and availability of both healthcare facilities and medical personnel throughout the country. This is done to manifest and raise the quality of life as well as the well-being of Indonesian citizens.

The government holds the obligation to fulfill and provide healthcare services to every citizen of Indonesia without any prejudice. This is regulated in the 'Chapter 28H section (1) Constitution of the Republic of Indonesia 1945, which states "every citizen has the right to live both physically and mentally in prosperity, to

reside, and to receive a good and healthy environment as well as receive healthcare service." In essence, healthcare services are implemented in order to prevent the proliferation of disease. Aside from that, it is meant to cure diseases, which includes medical care provided based on an individual relationship between one patient in need of cure and a physician taking the role in providing a solution to health issues suffered by the patient. Healthcare service becomes a responsibility of the government in maximizing quality, as well as the rapid and appropriate availability of healthcare services for the public. Along with the advancement of technology, medical equipment is rapidly improving as well, as indicated by the emergence of various modern and advanced devices.

The aforementioned devices have recently become widely used in various modern hospitals in Indonesia. Even so, the availability of adequate devices is not enough to improve the public health quality if not accompanied by the availability of adequate human resources. Moreover, the health of the people does not rely only on the availability of existing facilities and medical personnel, but also on other factors such as the health condition and willpower within the patient. Healthcare services done either individually or by a group are considered an activity of promotive, preventive, curative, and rehabilitative approaches that are implemented according to the people's needs as patients. Healthcare service is also meant to provide diagnosis to patients, to cure diseases, as well as support recovery in patients from certain ailments, either as an individual or family aggregate, as well as serving the purpose to maintain and improve service and health quality to prevent the emergence of diseases within the society, either individually or in groups.

One of the most fundamental aspects of online healthcare is the security of the patient's personal information. Within this context, Indonesian Law Number 11 of 2008 regarding ITE (Information and Electronic Transaction), as well as Indonesian Law Number 28 of 2022 regarding the Security of Personal Information, are of high relevance. Both regulations provide legal frameworks that regulate how personal information, including medical records, is supposed to be managed and protected. Patients have the right to know how their data is being used, accessed, and kept by providers of online healthcare services. Without adequate protection, the personal information of patients is at risk of falling into the wrong hands, which would lead to abuse of medical information. On the flipside, Indonesian Law Number 36 of 2009 regarding Health regulates the rights and responsibilities of medical staff in providing medical services, though it does not specifically rule over technology-based healthcare services. Because of that, even with the aforementioned regulation obliging medical personnel to keep the confidentiality of patients and provide a professionally standardized healthcare service, the implementation of the regulation within online services remains unclear. This results in legal uncertainties that threaten patients should there be violations in the service.

Examining the legal protection for patients in online health consultations, it is necessary to understand that the decree of Chapter 3 Section (2), Regulation of the Council of Medical Doctors Number 47 of 2020 regarding the Clinical Authority and Medical Practice via Telemedicine During the Period of Coronavirus Disease Pandemic 2019 (Covid-19) in Indonesia, states, "medical practice via electronic system of application in the form of telemedicine, as it was intended in section (1), is a service of consultation or teleconsultation provided by physicians and dentists under the principle of patient confidentiality." Online healthcare service poses a higher risk compared to their physical counterparts, particularly in terms of accuracy in diagnosis. Patients have the right of legal protection against potential medical error. Even with the Regulation of the Council of Medical Doctors Number 47 of 2020, which provides a guideline towards online practices, this regulation has not tapped into direct services to patients. The nonexistence of operational standards in the supervision of telemedicine platforms deteriorates legal protection and the quality of service for patients.

As aforementioned, online healthcare service poses a higher risk compared to their physical counterparts,

particularly in terms of accuracy in diagnosis. Diagnosis produced without direct examination holds the potential for errors that can lead to the endangerment of patients' health. Therefore, it is of great importance for the patients to receive legal protection when using digital healthcare services. The Regulation of the Council of Indonesian Medical Doctors Number 47 of 2020 regarding Clinical Authority does provide guidelines for physicians in online healthcare practices. However, the regulation is still confined to direct services toward patients. Moreover, the aforementioned regulation has not provided comprehensive guidelines related to operational standards that must be met by telemedicine platforms or the legal responsibilities of online service providers in ensuring the quality of service and the rights of the patient. The nonexistence of a firm and thorough regulation worsens the situation for it opens up an opportunity for online healthcare platforms to operate without adequate supervision, thereby endangering the safety of patients.

Based on the author's analysis, if connected to the theory of legal protection from Phillipus M. Hadjon, preventive legal protection, as explained by Hadjon, is a form of legal protection that is meant to prevent any violation or public loss before they happen. Preventive legal protection in online healthcare service is supposed to be present from the start, through clear and firm regulations to prevent the proliferation of issues in the future. This encompasses regulations of service quality standards, platform accreditation, and professional responsibilities of medical personnel. The Regulation of Health Ministry Number 20 of 2019 does provide a legal framework for telemedicine between healthcare facilities; however, the same regulation has not covered direct services to patients. The legal void in operational standards and protection of confidentiality shows the frailty in the preventive legal protection towards the rights of patients of digital services. On the other hand, a repressive kind of legal protection focuses on the management of disputes after they have already happened. In the context of online healthcare service, this encompasses mechanisms of settlement in disputes between patients and service providers when loss occurs, such as misdiagnosis or data breach. However, as of the current time, there is no regulation firm enough in the aforementioned mechanism. According to Hadjon's theory, a repressive protection needs to come with sanctions and a more effective legal system. Therefore, the regulation of legal complaint procedure and mediation in legal justice becomes crucial in ensuring justice for patients.

Moreover, within the context of medical malpractice, which could occur in telemedicine, repressive protections are required to involve sanctions toward medical staff who are proven guilty. The Indonesian Law Number 29 of 2004 regarding Medical Practice regulates medical responsibility; however, the implementations against medical violations frequently become arduous due to the difficulty in enforcing the law against medical procedures that are done without a face-to-face meeting. Therefore, it is important for the law to assert and impose strict sanctions against medical malpractices that occur in telemedicine services.

Both preventive and repressive legal protection within healthcare services should go along in synergy to create an integrated and effective legal system. Preventive protections serve the purpose of preventing losses by means of strict regulation in accrediting online healthcare platforms, competency requirements of medical personnel, as well as protection of patients' confidentiality. Alongside the advancement of digital technology, regulations that accommodate preventive aspects have become of utmost importance to maintain the quality of service and to prevent potential violations against the rights of patients from the start of the aforementioned service. On the other hand, the repressive kind functions as a restorative mechanism to patients' rights that have suffered a violation, such as malpractices or breach of personal information. The system of dispute settlement needs to be just as well as easily accessible, with firm implementation of sanctions against any violation. Hadjon's theory of legal protection is significantly relevant to be applied, because it emphasizes the importance of balance between prevention and countermeasure. Therefore, the country requires a comprehensive regulation encompassing both aspects to ensure maximum protection for patients of online healthcare.

Risks and Challenges Faced in Providing Legal Protection for Patients of Healthcare Services in the Digital Era

The advancement of digital technology, particularly within the scope of health, has created a series of conveniences for patients to gain medical services via online platforms or telemedicine. Even though this brings significant benefits in improving accessibility and quality of healthcare service, it also comes with major challenges and risks in relation to legal protection for patients. In this context, it is important to understand various risks and challenges to be faced in ensuring an effective legal protection for patients in the digital era. Urges to generate a clear regulation as well as a strong legal mechanism have become more demanding along with the flourishing of telemedicine practices and the utilization of electronic medical records. The following sections discuss several risks and challenges to be faced in providing legal protection for patients of healthcare services in the digital era, as stated in Table 1.

Table 1. Risks and Challenges Faced in Providing Legal Protection for Patients of Healthcare Services in the Digital Era

No.	Risk/Challenge	Description	Potential Impact
1	Void of Jurisdiction	The lack of a specific regulation to rule over online healthcare services, including the rights of patients, as well as the responsibilities of medical personnel.	Uncertainty of patients' rights, risks of abuse of service, and medical malpractice.
2	Inappropriate use of medical records	Management of patients' medical records that are prone to breach or abuse by irresponsible parties.	Violation of patients' privacy, financial loss, and damage to reputation.
3	Limited quality standard of service	The nonexistence of a consistent standard in relation to the quality and procedure of healthcare service in telemedicine, which could lead to inadequate service.	Abuse by unaccredited providers as well as potential medical error.

According to the aforementioned table, among the primary challenges in providing legal protection for patients of online healthcare services is the void in jurisdiction that specifically rules over telemedicine practices. Even though there is a presence of a regulation in relation to electronic transactions, a comprehensive regulation that elaborates legal connections between patients, doctors, and digital platforms is yet to be seen. This uncertainty elevates the risk of misuse and injustice due to undefined rights for the patients as well as responsibilities of service providers within the existing legal system. Moreover, abuse of personal information has become a serious risk within online healthcare services. Medical records that are very sensitive in nature may leak or be inappropriately used without strict protection. Even with the already established Constitution of Personal Data protection, the implementation still faces several challenges. Even further, the lack of standardized quality of service leads to an abundance of unaccredited platforms in operation without any supervision, risking misdiagnosis and imposing therapies that bring detriments to patients. The government needs to establish strict standards and accreditation.

Table 2. Risks and Challenges Faced in Providing Legal Protection for Patients of Healthcare Services in the Digital Era

No.	Risk/Challenge	Description	Potential Impact
4	Lack of effective supervision	A constrained supervision of medical practices in online healthcare services due to the lack of regulation that covers the aforementioned supervision.	Substandard medical practices, an increased risk of malpractice, and loss for patients.
5	Issues in dispute settlement	Vagueness in the mechanism for settling disputes between patients and service providers, either through civil law or administrative law.	Patients are having difficulty in achieving justice, and there are legal uncertainties in establishing patients' rights.

Supervision of medical practice done online is relatively more complicated compared to medical practices that are done face-to-face. Without adequate surveillance, there is a possibility of violations done by service providers or medical staff, either in diagnosis, treatment, or in terms of medical ethics. The inability to directly oversee medical practices elevates the risk of malpractice, which would lead to patients being exposed to unprofessional and unsafe medical care. Speaking of settlement of disputes, in an ever-digitalized world, vagueness within the system of settlement in disputes between patients and healthcare service providers frequently becomes a serious issue. Patients who feel taken advantage of by online medical care, either from misdiagnosis or breach of personal information, are likely to face difficulty in fighting for their rights. The lack of a clear and transparent procedure in solving disputes may lead to injustice towards patients and break the trust of people in digital healthcare services.

The Health Law Needs to Adapt to The Advancement of Digital Technology

The advancement of digital technology has had a major impact on almost every aspect of human life, including in the health sector. One of the primary examples of this change is the emergence of telemedicine, which utilizes digital platforms to provide healthcare services without the need for face-to-face meetings. With this progression, the health law must adapt to provide adequate protection for patients, medical personnel, and service providers. However, the rapid shift in technology within the health sector frequently outpaces the progression of the regulation itself. Therefore, it is important to analyse how the health law must adapt to the advancement of digital technology.

Among the primary challenges is how the health law is able to generate a regulation that is responsive to the demands of technology-based healthcare services. The currently existing regulations, such as the Indonesian Law Number 38 of 2009 regarding Health and the Indonesian Law Number 11 of 2008 regarding ITE, only regulate a partial aspect of digital healthcare service and focus more on the traditional healthcare system. Even with the ITE Article ruling over electronic transactions, this regulation is yet to adequately accommodate maintaining the quality and standard of medical service within the context of telemedicine. For that reason, legal revisions and adjustments are required to be able to encompass a more detailed regulation related to digital healthcare services.

The health sector is no longer able to overlook digital technology as an integral element of a healthcare system as a whole. On one side, the progression in technology brings forth the possibility to improve accessibility of healthcare services among people, particularly within secluded areas or among those with limited resources and time. However, on the flipside, there is a potential for medical errors, violations of personal information, and vagueness related to the responsibilities of medical staff within digital services, which requires the health law to provide more clarity in regulating such issues. Therefore, the development of special regulations toward

telemedicine and other digital healthcare technologies becomes a crucial step in ensuring a safe and proven service for patients.

These shifts require not only adjustments within the substance of law, but also in its procedure. One of the elements that needs to be carefully regulated is the use of patients' personal information. In an online healthcare service, medical records are generally gathered, saved, and analysed via digital means, which leads to them being very prone to inappropriate use. The Indonesian Law regarding PDP (Protection of Personal Data) that was established in 2022 made a good start; however, there remain several challenges that need to be addressed in implementing the protection effectively, particularly within the healthcare sector. For that reason, the health law must reaffirm that the capability of the regulation that oversees medical records is adequate in strictly and thoroughly maintaining the confidentiality of patients.

Aside from that, within the context of medical responsibilities, the health law also needs to adapt to ensure that the medical staff providing services via digital platforms stay professional and responsible. In several countries, medical practices by means of telemedicine are regulated by certain ethical codes that require physicians to ensure an identical standard of service within face-to-face medical practices. That being said, in Indonesia, the regulation in relation to doctors' responsibilities within the scope of digital service has not been explicitly established. This becomes important, considering that within telemedicine, physicians and patients are incapable of performing any meaningful physical examination, which increases the potential of misdiagnosis or faulty treatments. Therefore, the health law must ensure that the physicians providing online services remain confined to the established medical standard.

Alongside the advancement of technology such as Artificial Intelligence (AI) and data analytics, which are more frequently used in medical practices to help provide diagnosis or treatment, the health law must also be able to accommodate this development. AIs within the medical scope have the potential to improve accuracy in diagnosis and, at the same time, minimize human errors, but also open up new legal issues. For example, should an AI-based system produce an error that leads to misdiagnosis or faulty treatment, who would be responsible? For that reason, the health law must develop a regulation that has the capacity to determine who should be accountable for the utilization of technology in diagnosis and treatment, as well as how to effectively and safely integrate a technology-based system with the wider healthcare system.

Licensing as well as accreditation have also become an important issue within the context of digital healthcare services. In the meantime, medical personnel who provide services through online platforms must possess an official license to operate. That being said, a challenge to the regulation emerges as the medical staff providing online service might have the possibility of not being registered within the same region as the patient or even within the same country. This leads to jurisdiction issues, of which the established regulation is unable to clearly determine who would be responsible should there be any legal issue in relation to digital healthcare services. For that reason, it is of high importance for the health law to rule over cross-border licenses for medical personnel providing healthcare by means of digital platforms, either at the national level or internationally.

According to the writer's analysis, if connected to the theories of health law, its concluded to be aligned with this particular theory, the health law must ensure that the rights of patients, including the rights to receive proper and clear information related to medical treatments taken, the right of informed consent, as well as the right of confidentiality must be preserved even against the ever-changing system. This is the point of which the adaptation of health law becomes important so that the existing regulation will be able to accommodate the ever-advancing technology, as it was explained within the Indonesian Law Number 36 of 2029 regarding Health and The Indonesian Law regarding PDP which already encompass several aspects of legal protection for

patients; rights, though still need to be perfected with new, more relevant regulations.

Based on the theory of a sustainable healthcare system, the healthcare legal system must be able to adjust itself to changes within the context of social, technological, and economic factors, to ensure that healthcare services remain fair and effective. A sustainable healthcare system not only prioritizes wide-ranging and well-distributed access for the people, but also ensures the quality of service remains unaffected by the advancement of technology. Within this context, the health law must provide an adequate legal framework for regulating technologies used in the healthcare system. For example, telemedicine must be regulated in ways that ensure the consistency of the quality of services according to the established standard. However, adaptation towards new technologies, such as the involvement of AI in providing medical diagnosis or utilizing the assistance of an algorithm in making medical decisions, needs to be counterbalanced with regulations that oversee legal responsibilities should there be an inappropriate use of technology. The health law must be able to respond by establishing a guideline to ensure the aforementioned technology actually provides assistance instead of completely overtaking medical decision-making.

Besides that, data security is a critical issue within digital healthcare services. In the theory of the health law, protection of personal data is regulated as one of the fundamental rights of patients that must be strictly guarded by every entity involved within the aforementioned healthcare service. Digital technology provides convenience in managing medical records, but it also increases the risk of breaches as well as abuse of data. The health law needs to adapt by developing a more potent regulation related to the management and security of medical data, which encompasses regulations that decide who has the right to access the aforementioned data, how they are supposed to be stored and guarded, and what the consequences would be should a violation occur. The recently published PDP constitution must be strictly applied within the digital healthcare sector to ensure not only the technical safety of patients' data but also that it is managed according to the principles of ethics and law itself.

As a whole, the health law must adapt rapidly and be responsive to the very quickly advancing digital technology. In dealing with the challenge, theories of health law, such as the theory of human rights protection, the theory of sustainable healthcare system, and the theory of justice in healthcare access, may provide a strong foundation in the development of relevant regulations. That being said, in order to ensure optimal use of technology without sacrificing the rights of patients, the Indonesian health law needs to immediately make adjustments, particularly in terms of regulation of telemedicine, security of personal data, and professional responsibilities of medical personnel. With the appropriate legal adaptation, we will be able to ensure technology to provide not only improved access and quality of healthcare service, but also to remain operating within legal frameworks that protect the fundamental rights of patients.

CONCLUSSION

According to the analysis, it is concluded that legal protection for patients of online healthcare services is very important to ensure the protection of patients' rights in the ever-flourishing digital era. According to Hadjon's theory of legal protection, both preventive and repressive protection must be applied in synergy in regulating online healthcare services. Preventive legal protection is applicable by means of clear regulation within standards of service, management of personal data, as well as imposing obligations on medical personnel of online services in order to prevent the potential loss and violation. On the other hand, repressive protection functions as a pathway for patients who have suffered losses to achieve justice by means of effective legal mechanisms, such as settlement of disputes and enforcement of sanctions against medical malpractice or inappropriate use of data. By integrating both aspects of legal protection, the Indonesian legal system will be able to ensure that the online healthcare service functions with safety, fairness, and is aligned with patients' rights that must be protected. Even though online healthcare service offers an abundance of benefits, such as

easier and quicker access, they also come with several risks and significant challenges in providing legal protection for patients.

The void of jurisdiction in relation to the regulation overseeing telemedicine, potential for inappropriate use of personal data, limitations in the standard of service quality, as well as a deficiency of effective supervision, have become a primary issue that needs to be overcome immediately. Moreover, issues in the settlement of disputes between patients and online healthcare service providers worsen the whole ordeal. For that, it is necessary for the government and any involved parties to quickly develop thorough and clearer regulations able to protect the rights of patients, to strictly regulate personal data management, and to ensure the quality of online healthcare services is in accordance with the established medical standard. Without the aforementioned actions, risks to the rights and safety of patients might be exacerbated in the present digital era.

The health law must adapt to the rapid progression of digital technology to ensure adequate protection for patients, as well as maintain quality and justice within healthcare services. The aforementioned adaptation is crucially important in regulating practices of telemedicine, ensuring ethical and professional standards for medical personnel providing digital service, as well as protecting personal data from the potential of breach and inappropriate use. Therefore, the health law must have the capacity to maintain a balance between innovation of technology and the protection of fundamental rights of patients, as well as to create an adaptive and responsive legal framework that enables the healthcare sector to flourish safely and with fairness in the digital era.

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Social Support and Job Stress in Female Police Officers: Full mediation from Work-Life Balance

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Abstract

Women's dual roles as workers and housewives render them particularly susceptible to work stress. The objective of this study was to ascertain the role of work-life balance in female police officers. The research hypothesis posits that work-life balance plays a mediating role in the relationship between social support and work stress among female police officers. The present study employed a quantitative survey-cross-sectional design. The data were collected using a questionnaire disseminated via Google Form and subsequently distributed through social media with a purposive sampling technique. A total of 190 female police officers participated in the operation. The instruments employed in this study included the Revised-Multidimensional Scale of Perceived Social Support, the Work-Life Balance Scale, and the Job Stress Scale. The data analysis technique employed utilized the PROCESS macro model 4 mediation analysis by Hayes. The findings indicated that work-life balance effectively mediated the relationship between social support and work stress. This finding underscores the significance of social support, defined as the presence of conditions that promote effective work-life balance, in mitigating work stress among female police officers. The limitations and recommendations are delineated in the section's conclusion.

Keywords: social support, female police officers, work stress, work-life balance

INTRODUCTION

Job stress is defined as an adaptive response of each individual, resulting from actions taken (Putro et al., 2020). Female police officers are among the professions most susceptible to stress. Research indicates that women experience elevated levels of stress relative to men, attributable to demands stemming from professional and familial contexts (Medaris, 2023; Rojuaniah, 2020). Based on data from October 25, 2024 (correspondence with the Indonesian National Police's HRD), the number of additional female police officers in 2023 was 1,171, and in 2024, another 2,031 were added, resulting in a yearly increase in the number of female police officers in Indonesia. The increase in the number of female police officers has complex consequences. On the one hand, women have the opportunity to develop their potential and contribute to the economy. However, on the other hand, women face a double burden that can lead to work stress. Not only married policewomen, but also single policewomen with family responsibilities can experience work stress.

Indonesian Law No. 2 of 2002 concerning the Indonesian National Police explains that policewomen have the same duties, functions, vision, mission, and responsibilities as male police officers and are required to comply with existing regulations within the police organization, including working hours. Field operations can last until late at night, and even lead to days without returning home due to flexible working hours, overtime, and sudden and mandatory state duties. This makes it difficult for female police officers who are also mothers to balance their family and career roles (Hidayat & Rozana, 2021). Therefore, the act of balancing the responsibilities inherent in both law enforcement and motherhood frequently gives rise to work-family conflict, a state of affairs that has the potential to exert a detrimental influence on performance and mental health (Sari & Maulida, 2021).

Concurrently, gender discrimination (Schafer et al., 2024) and a paucity of social support (Shabrina et al., 2024) have also been identified as salient factors. Social support can be defined as the comfort, care, and appreciation given to a person by another person or group (Sarafino & Smith, 2011). Social support is a critical factor in the effective mitigation of the adverse effects of occupational stress and work-family conflict (Olivia & Frianto, 2020). A negative relationship between social support and work stress has been documented among female police respondents, indicating that increased social support is associated with reduced perceived work stress (Prasinta & Widyastuti, 2022). A similar phenomenon has been observed in the field of elementary education (Werenfridus et al., 2023), yet this phenomenon is not evident among Generation Z (Attiq & Kristanto, 2024).

The inconsistent findings of the present study suggest the presence of other variables that influence the relationship between social support and work stress in female police officers, including work-life balance. Work-life balance is defined as the extent to which an individual is equally engaged and satisfied in both their professional and familial spheres (Rojuaniah, 2020). The hypothesis suggests that work-life balance functions as a mediator (Zellawati & Fasha, 2021). Consequently, an enhancement in social support has been demonstrated to be associated with elevated work-life balance scores among female police officers (Nuramalia et al., 2023). In contrast, work-life balance has been shown to be inversely associated with work stress (Hani, 2020) and contributes significantly to job stress reduction, with a percentage of 66.2% (Asyura, 2024).

This finding aligns with the tenets of Bronfenbrenner's ecological theory, which elucidates the interplay between microsystems and mesosystems. The microsystem encompasses the relationship between individuals and their surrounding environment, such as their place of residence and their place of employment. The mesosystem, meanwhile, consists of the relationships between the primary settings that contain individuals. For instance, the mesosystem includes the relationship between home and workplace, home and coworkers, and home and superiors. These social structures do not directly interact with the developing person, yet they have a significant impact (Bronfenbrenner, 1979). Consequently, the pertinence of this model persists in industrial and organizational settings, where female police officers encounter persistent stress stemming from their professional environment, thereby exerting a detrimental influence on their broader interpersonal relationships (Bone, 2015). The objective of this study was to ascertain the role of work-life balance in female police officers. The research hypothesis posits that work-life balance plays a mediating role in the relationship between social support and work stress in female police officers.

METHODOLOGY
Research design
This study employs the quantitative explanatory method. The design used was a cross-sectional survey. The survey was based on participant self-reports.

Participants

Participants in this study were female police officers in Indonesia. The sampling technique used was purposive sampling because the researchers determined the characteristics of the population of interest and then found individuals who matched the required characteristics (Christensen et al., 2015). The minimum sample size was estimated using Monte Carlo Power Analysis for Indirect Effects software using effect sizes from previous studies. The effect size between social support and work stress was calculated using the results of a study conducted by Prasinta & Widyastuti (2022) of 0.18. The effect size between social support and work-life balance was calculated using the results of a study conducted by Nurhasanah (2021). Due to the heterogeneity of previous studies, the effect size was halved to 0.23. Meanwhile, the effect size between work-life balance and work stress was calculated using the results of a study (Asyura, 2024). Due to the heterogeneity of previous studies, the effect size was halved to 0.33. If the desired power is 0.80, the minimum number of participants for this study was 160.

Data Collection

Data collection was conducted from December 17th to 21st, 2024. The survey was in the form of a Google Form questionnaire distributed via WhatsApp. Before completing the questionnaire, participants were given an Informed Consent form. If they agreed, they could proceed to the next question. During this time period, 222 respondents were obtained. One person declined to participate, 23 failed the attention test, and 8 were extreme outliers, leaving a final sample of 190. The sample had a mean age of 34.53 years (SD = 7.87) and an average number of dependents of 2.14 (SD = 1.69). Educational backgrounds included high school/vocational high school (SMA) for 61 individuals, bachelor's degree (S1) for 104 individuals, and 25 individuals. Marital status included 16 individuals who were single, 161 individuals who were married, 7 individuals who were divorced, and 6 individuals who were living together. Rank-wise, 141 individuals held the rank of Brigadier, 26 individuals held the rank of First Officer, and 23 individuals held the rank of Middle Officer.

Measurements

This study uses three measurement tools: Revised Multidimensional Scale of Perceived Social Support, Work-Life Balance Scale, and Job Stress Scale. All instruments used were previously used in research and therefore have undergone validity and reliability testing. The Revised-Multidimensional Scale of Perceived Social Support (R-MSPSS), developed by Ho & Chan (2017), was used to measure social support variables. This scale is an extension of the Multidimensional Scale of Perceived Social Support (MSPSS) by Zimet et al., 1988. Researchers used a scale translated by Oktarina et al. (2021. This scale contains 16 favourable items, consisting of four dimensions: perceived social support from principal (leader), perceived social support from colleagues (coworkers), perceived social support from family (family), and perceived social support from friends (non-colleagues). This scale uses a Likert-style scale with seven response options (1 = "strongly disagree," 2 = "disagree," 3 = "somewhat disagree," 4 = "neutral," 5 = "somewhat agree," 6 = "agree," and 7 = "strongly agree"). The construct validity and reliability of this scale were tested by Oktarina et al. (2021) using CFA, and the factor loading coefficients of the R-MSPSS ranged from 0.48 to 0.93. The goodness-of-fit test results indicated that the four-factor R-MSPSS had good fit criteria. Regarding its reliability, it shows that each subscale of the R-MSPSS has a Cronbach's Alpha value in the range of 0.72 to 0.83.

The Work-Life Balance was measured using the Work-Life Balance scale in accordance with the theory proposed by Fisher. The Work-Life Balance scale used refers to the Work Life Balance scale adapted by Gunawan (2019) from the questionnaire of Gwenith G Fisher, Carrie A. Bulger, and Carlla S. Smith. This scale contains 17 unfavourable and favourable items with 5 answer choices (1 = "very often". 2 "often", 3 = "sometimes", 4 "rarely", 5 = "never") consisting of two aspects, namely the resources aspect which oversees 2 sub-aspects, namely Work Enhancement of Personal Life (WEPL) and Personal Life Enhancement of Work (PLEW), the demands aspect which oversees 2 sub-aspects, namely Work Interference with Personal Life

(WIPL) and Personal Life with Interference Work (PLIW). The scale uses a Likert model with 5 choices. The validity and reliability of the Work-Life Balance scale have been tested by Gunawan (2019). The validity value for all items through CFA is SLF> 0.5, which means all items are declared valid. The reliability of the Work-Life Balance scale was 0.976 CR and 0.707 VE, indicating that the work-life balance score interpretation is considered reliable.

The Job Stress Scale (ISS), developed by Parker & DeCotiis (1983), is used to measure symptoms of work stress experienced by workers. Researchers used the JSS scale, which has been adapted into Indonesian by Sarah (2018). This survey consists of 13 favourable items covering two dimensions: Time Pressure and Anxiety. The scale uses a Likert model with four response options (1 = "never," 2 = "rarely," 3 = "sometimes," 4 = "often," 5 = "very often"). In the study (Sarah, 2018), construct validity and reliability were tested for each dimension using CFA. The Time Pressure dimension yielded a chi-square value of 9.15 (p-value>0.05), and the anxiety dimension yielded a chi-square value of 101.95. The p-value was >0.05, indicating that each dimension accurately measures only one factor. Reliability was demonstrated by the Cronbach's Alpha value for each dimension, with the anxiety dimension being 0.74 and the time pressure dimension being 0.86.

Data Analysis

This study examined the effect of social support on work stress in female police officers, with work-life balance as a mediator. To ensure data integrity, a data cleaning procedure was required, with participants who responded incorrectly to the attention check being excluded from the study. The analysis included a common method bias test, descriptive statistics, matrix correlation, assumption testing, and hypothesis testing. To test for common method bias, Harman's Single Factor Test was conducted. All items and variables were entered into an exploratory factor analysis using SPSS 25. The results showed that a single factor only explained 32.28% (<50%) of the total variance in the measurements, thus concluding that common method bias did not occur.

Hypothesis testing was conducted using Process macro model 4 by Hayes (Hayes & Little, 2022) in SPSS 25. This test will determine whether work-life balance has an indirect effect in mediating the relationship between social support and work stress in female police officers.

RESULTS

The data in Table 1 shows that age is negatively correlated (r=-0.180) with the work-life balance variable, and rank is negatively correlated (r=0.200) with the work-life balance variable. Meanwhile, the number of dependents correlated negatively (r=-0.175) with work-life balance and positively (r=0.154) with work stress. Therefore, age, rank, and number of dependents were controlled for in the hypothesis testing.

Table 1. Descriptive Statistics and Correlation Matrix

		M	SD	1	2	3	4	5	6	7	8
1	DS	5.892	0.815	-							
2	WLB	4.389	0.497	0.502**	-						
3	SK	1.533	0.534	-0.384**	-0.702**	-					
4	Age	34.53	7.872	-0.107	-0.180*	0.074	-				
5	Rank	1.38	0.693	-0.095	-0.200**	0.088	0.427**	-			
6	Edu	2.49	1.078	-0.059	-0.123	0.141	0.044	0.381**	-		
7	SP	2.02	0.498	-0.017	-0.007	-0.033	0.417**	0.120	0.104	-	
8	JT	2.14	1.688	-0.089	-0.175*	0.154*	0.333**	0.213**	0.106	0.180*	-

Note: N=19B: Rank = 1 (Brigadier), 2 (First Officer), 3 (Middle Officer): Education = 1 (High School/Vocational High School), 2 (D3), 3 (S1). 4 (S2): Marital Status = 1 (Unmarried). 2 (Married), 3 (Divorced), 4 (Divorced): DS = Social Support: WLB Work-Life Balance: SK - Work Stress, Edu - Education: SP = Marriage Status; JT = Number of Dependents: (*p <0.05, **p <0.01)).

Table 2. Linearity Test Results

	Linearity (Sig.)	Deviation from Linearity
Work Stress*Social Support	<.001	0.006
Work-Life Balance*Social Support	<.001	0.001
Work Stress*Work-Life Balance	<.001	0.901

Based on Table 2, the linearity value for the three variable relationships is significant. 0.00 (≤ 0.05). This indicates that the relationship follows a linear slope. The Deviation from Linearity value for the relationship between work stress and work-life balance was 0.901 (>0.05), indicating no significant deviation in the data. Meanwhile, the Deviation from Linearity value for the relationship between work stress and social support and work-life balance and social support was <0.05, indicating a significant deviation in the data. Visual inspection of the residual scatterplot and predictions from the regression analysis revealed a linear relationship, indicating that the data could still be explained using linear regression analysis.

Table 3. Multicollinearity Test Results

Variable	VIF	Tolerance
Social Support	1.337	0.748
Work Life Balance	1.337	0.748

Table 3 shows us that all values of VIF are below ten, and the values of tolerance are above 0.1. These mean that the assumption that there is no multicollinearity is fulfilled.

Table 4. The Results of the Heteroscedasticity Test

	T	Sig.
Social Support	-1.498	0.136
Work Life Balance	-1.384	0.168

To test for heteroscedasticity in the regression model, the Glejser test was used by regressing the independent variables against the absolute residual values. Based on Table 4 above, the Sig. Values for the social support and work-life balance variables are >0.05, thus concluding that there are no heteroscedasticity symptoms.

Table 5. Residual Normality Test Results

	Kolmogorov- Smirnov	p
Residual	0.083	0.134

Before conducting the hypothesis test, the researcher tested the residual normality assumption using the Kolmogorov-Smirnov test with the exact approach. The results in Table S show a p-value >0.05. This indicates that the residual data is normally distributed.

Table 6. Model Summary

R	R-Square	MSE	F	df1	df2	p
0.40	0.16	0.24	9.01	4.00	185.00	0.00

Table 6 above shows the results of the hypothesis testing for the research model. This research model was able to predict 16% (R-square 0.16) of the variance in work stress. This means that 84% of the variance remains from other predictors that have not been examined in this study.

Table 7. Direct Effect Test with Process Macro by Andrew F. Hayes

	Work-Life Balance				Work Stress			
	ϐ	p	LLCI	ULCI	ϐ	p	LLCI	ULCI
Social Support	0.29	0.00	0.22	0.37	-0.03	0.48	-0.11	0.05
Work-Life Balance					-0.74	0.00	-0.87	-0.61
Age	0.00	0.48	-0.01	0.01	0.00	0.35	-0.01	0.00
Rank	-0.08	0.10	-0.18	0.02	-0.03	0.47	-0.12	0.06
Number of dependents	-0.03	0.17	-0.07	0.01	0.02	0.30	-0.02	0.05

Based on the mediator output (work-life balance), social support has a significant positive effect on work-life balance (ϐ = 0.29; p <0.05). Meanwhile, based on the output of the dependent variable (work stress), social support does not have a significant negative effect on work stress (ϐ = -0.03; p >0.05), and work-life balance has a significant negative effect on work stress (ϐ = -0.74; p <0.05). From several controlled variables, it was found that age (ϐ = 0.00; p >0.05), rank (ϐ = -0.08; p >0.05), and number of dependents (ϐ = -0.03; p >0.05) did not have a significant effect on the work-life balance variable. The control variables of age (ϐ = 0.00; p >0.05), rank (ϐ = -0.03; p >0.05), and number of dependents (ϐ = 0.02; p >0.05) also did not have a significant influence on the work stress variable.

Table 8. Results of Mediation Analysis

Direct Effect	SE	LLCI	ULCI
-0.03	0.04	-0.11	0.05
Indirect Effect	**Boot SE**	**Boot LLCI**	**Boot ULCI**
-0.22	0.04	-0.30	-0.15
Total Effect	**SE**	**LLCI**	**ULCI**
-0.24	0.04	-0.33	-0.16

Based on the results of the mediation test in Table 8, it is known that the direct effect shows a value of ϐ = -0.03, CI (-0.11 – 0.05), p>0.05, the indirect effect shows a value of ϐ = -0.22, CI (-0.30 – -0.15), and the total effect ϐ = -0.24, CI (-0.33 – -0.16). The results of this analysis indicate that in the direct relationship, social support does not have a significant negative effect on work stress. Meanwhile, work-life balance has a significant role in mediating the effect of social support on work stress. So the form of work-life balance mediation is full mediation. Work-life balance can enhance the influence of social support on work stress, so that the total effect of social support (ϐ = -0.24, CI (-0.33 – -0.16) has a significant negative influence on work stress if it is through work-life balance conditions. Therefore, the hypothesis that work-life balance mediates the relationship between social support and work stress is supported by the data.

DISCUSSIONS

The results of the study showed no significant direct effect of social support on work stress. The social support received by female police officers was not sufficient to reduce their work stress. This finding aligns with research done by Attiq & Kristanto (2024) and Daawi & Nisa (2021), which found that social support did not have a significant negative relationship with work stress. This means that the social support received was not significant enough to reduce work stress. This could be due to the social support received by individuals being inadequate or not meeting their needs (Sarafino & Smith, 2011).

However, this study found a significant positive effect between social support and work-life balance. This finding aligns with research conducted by Nurhasanah (2021), which explains the significant positive effect of social support and work-life balance among police officers in Samarinda. The greater the social support received, the easier it is to create a balance between work and personal life. Despite the high workload faced

by police officers, the presence of those around them, such as family, superiors, and co-workers, helps police officers balance their personal and work lives. Paula, Brought, and Michael in Nugraha & Rini (2021) explain that social support can reduce conflicts experienced by individuals in their work and home lives, making it easier for them to achieve work-family balance.

Work-life balance has a significant impact on reducing work stress. The higher an individual's work-life balance, the lower their perceived work stress. This finding aligns with research conducted by Asyura (2024), which found a significant relationship between work-life balance and work stress among police officers at Payakumbuh City Police Resort. A balance between work and personal life allows workers to relax after work and reduces work-related stress. This balance fosters happiness, which can reduce stress, increase productivity, and provide satisfaction in both personal and professional lives (Marecki, 2024).

The results of the mediation analysis indicate that work-life balance significantly mediates the relationship between social support and work stress in female police officers. This means that social support will significantly reduce work stress if it creates a work-life balance. A balance between personal and work life can be achieved through appropriate social support. When individuals achieve a balance between personal and work life, they are better able to manage their time and effectively handle the demands of both work and personal life, thereby minimizing stress. This finding aligns with research conducted by Anandari et al. (2018) that found that work-life balance and social support play a role in reducing work stress levels in Balinese women working in a 4-star hotel in Badung Regency.

The results of the study on the relationship between social support and work stress mediated by work-life balance in female police officers indicate that differences in age, rank, education, marital status, and number of family dependents are not significant factors determining the relationship between social support and work stress. These findings indicate that work stress experienced by female police officers in their demographic context (age, rank, education, marital status, and number of family dependents) tends to be the same when faced with social support received and the condition of work-life balance perceived.

CONCLUSION

This study found that work-life balance plays a significant role in mediating the relationship between social support and job stress. Social support can reduce job stress if it creates a work-life balance for female police officers. Recommendations for future research include incorporating other factors that can influence job stress, such as workload, length of service, working hours, and the work environment, to better predict the causes of job stress. Police agencies are advised to develop policies as a form of social support that can encourage a work-life balance for female police officers, thereby reducing the effects of job stress.

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The Reputation of the Indonesian National Police (Polri)

(Narrative Network Analysis on Instagram @korlantaspolri.ntmc)

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Abstract

Social media interactions play a significant role in shaping public opinion through narratives circulating within digital networks, which influence the reputation of the Indonesian National Police (Polri), both positively and negatively. This phenomenon became particularly visible following the implementation of Operation Ketupat 2025, which attracted public attention due to traffic congestion during the homecoming period and triggered widespread reactions from netizens on social media. This study analyzes the narrative network of Polri's reputation on the Instagram account @korlantas.ntmc, aiming to identify key actors who occupy central positions in creating, shaping, and disseminating narratives. The research is grounded in the concepts of narrative analysis within social network analysis (SNA) and Instagram as a Social Network Site (SNS). A mixed-method approach with a qualitative descriptive emphasis was employed. Data were collected by identifying nodes and links from Instagram comments using IGcomment and analyzed with Gephi 0.10.1 to visualize the narrative network and assess reputation dynamics. The findings reveal two key actors based on degree, betweenness, and closeness centrality measurements in the post titled "Member of the Indonesian House of Representatives Habiburokhman: This is the Smoothest Homecoming in History." These findings provide insights for future research on narrative networks and digital reputation management. To reduce negative public responses, Polri should consistently reflect the values of the nation's four basic consensuses, encouraging more constructive and responsible discourse on social media.

Keywords: narrative network analysis, instagram, Polri, social network site

INTRODUCTION

Police institutions in various countries, including the Indonesian National Police (Polri), have become the subject of intense discussion on social media globally. The Swiss police, for example, require a culture of control in managing their image and public relations (Meyer, 2017). This indicates that police institutions worldwide face a common issue: managing their image, or more precisely, their reputation, through narratives on social media. The diverse narratives that develop can impact the reputation and legitimacy of public institutions, especially when the public not only consumes information but also actively seeks, produces, and disseminates content on social media. This creates a virtual public space that serves as a platform for various issues, including the performance and reputation of public institutions (Anggreani et al., 2020). With the

expanding adoption of social media, the public is now more active in forming and disseminating opinions about police activities, both their successes and the controversies that arise. This is especially true with the existence of social media as part of technological developments that allow people to interact with one another through the concept of sharing information (Bachtiar et al., 2022).

Negative narratives about the Polri often dominate public conversations on social media (including Instagram), despite the institution's efforts to respond to public complaints by delivering positive news to rebuild public trust. For example, in a post from the TikTok account @listyosigit titled "Stop Extortion, Gain Public Trust," the National Police Chief emphasized the need to stop illegal levies and simplify Standard Operating Procedures (SOPs) for public services. Comments ranged from support to reports of violations and complaints experienced by the Indonesian public. Ideally, narratives related to the Polri on social media should be positive, considering the importance of building public trust, reducing negative stigma, encouraging participation, and improving the quality of service. This indicates that, despite the Polri's efforts to establish a positive reputation through digital communication on social media, public opinion and comments tend to be negative in reality. The relationship between the National Police and the public on social media needs to be interactive, collaborative, and mutually supportive, with the National Police fulfilling its role in providing civil services, maintaining security and order, responding to crime reports, providing assistance, and providing community development (Arif, 2021; Hasibuan et al., 2021; Rachmad & Pramono, 2024). Therefore, all elements of the police force need to internalize the *Tribrata* values, namely: *First*, to protect, nurture, and serve; *Second*, to maintain security and order; and *Third*, to enforce the law in a professional, transparent, and accountable manner.

Several previous studies have shown polarization in social media narratives regarding public institutions, the impact of information technology developments, and the image and reputation of the Polri. Some narratives highlight the spread of hashtags related to public institutions or the Polri, such as #ProfesiUntukMengabdi, #UsutTuntas, and #PercumaLaporPolisi on Twitter (Setiamukti & Nasvian, 2023; Syafuddin, 2022; Veyliza & Zulzilah, 2023). Meanwhile, other narratives discuss the police's public relations (PR) efforts in maintaining public order, dealing with provocative issues, and restoring the image of the Polri (Alwaton, 2023; Ismoyo et al., 2019; Sahman et al., 2018). Then the development of information technology also creates online haters on social networking sites, such as online hate speech, which is a cybercrime and requires more attention from the intelligence police (Imran, 2019; Prisgunanto, 2019). Not only that, it turns out that the image of the police is not only influenced by social media, but also opinions that generally come from the beliefs, experiences, and cumulative media consumption of the individual's choices (Wozniak et al., 2021). In this context, an image creates a reputation. The police appear to be more focused on maintaining their reputation than on using social media transparently, in accordance with its stated functions, such as providing public service announcements instructing citizens to be wary of illegal activities, preventing crime, raising public awareness, and mobilizing the community to provide information about crime in their neighborhoods (O'Connor, 2017; Ralph & Robinson, 2023; Walsh & O'Connor, 2019). Although several studies have discussed the topic of public institutions, the Polri, and the use of information technology and social media in relation to image or reputation, there has not been a study that specifically examines the spread of narrative networks in the context of the Polri's reputation on Instagram @korlantaspolri.ntmc.

Reputation can be understood as the sum of public perceptions of an institution's integrity, capabilities, and intentions. It can also be defined as a set of public beliefs about an organization's capacity, intentions, history, and mission, embedded within a diverse network of audiences or reflected through public opinion and trust in the skills and qualities of individuals, companies, and institutions (Lock & Jacobs, 2025; Meirinhos et al., 2022). In this context, reputation encompasses transparency, credibility, and legitimacy in the eyes of the public, which can be measured through public response and interactions on social media. Habermas (1991, p. 189) explains that mass media, as a contemporary public space, expand the boundaries of traditional communication, allowing discussions to occur without time or geographical limitations, and providing greater access for various community groups to engage in dialogue and participate in public affairs. This means that reputation formation is no longer a one-way process, but rather the result of a dialogical process between institutions and the public that takes place openly in the digital public sphere. From a communications perspective, reputation is formed not only by direct public experience but also by the efforts of an organization's public relations (PR) division. Whether a reputation is good or bad, whether it is strong or weak, depends heavily on management's commitment to achieving established goals and the ability to communicate

them (Pradini & Wempi, 2019). This shows that an institution, organization, or company tries to maintain its reputation through communication activities designed by public relations, such as utilizing communication media and managing communication effectively in order to build a positive reputation, maintain harmonious relationships, and be mutually beneficial (Dinata et al., 2025; Rahmi, 2023). Thus, reputation in the digital era is no longer formed from direct experience, but also from the construction of meaning resulting from interactions between institutions and the public in the digital public space, making it important for Polri to build narratives, strengthen trust, and expand public support through narrative connectivity and its network structure.

A network is conceptualized as a structure consisting of individuals or groups connected by relationships. In this case, a network represents a system that only captures the basic patterns of relationships between elements, such as nodes (or vertices) and links (or edges) (Newman, 2010, p.2). This perspective is known as network theory, with a central focus (centrality) on the relationships between actors in various sectors, one of which is communications. In this area, it can be concluded that a person's communication forms a specific network pattern that corresponds to their position within the network (Yuliana, 2010). This is in accordance with the theory of the network perspective, which is a collection of nodes (actors) and links (ties) of the same type that connect these actors (Daly, 2010, p.18). Nodes can be people, teams, organizations, industries, departments, or other entities that are interconnected through links in the form of friendships, communication patterns, or interdepartmental conflicts. Thus, communication can be seen as an arrangement of different elements within a system that can be identified through the communication flow patterns within it (Rogers & Kincaid, 1981, p.75). There are three levels of "network" studies based on the direction of causality as well as the level of analysis, namely: *First*, the dyad level shows the friendship relationship between two people (cohesion) to predict "who" is friends with "whom" based on similar interests; *Second*, the node level highlights centrality in the trust network (centrality) to predict the spread of information, identify influential individuals, and determine the center of the network; and *Third*, the network level looks at the density of relationships (density) to predict the structure, distribution of relationships, and cooperation in group communication networks (Borgatti et al., 2024, p.8). However, researchers will only use the actor-level analysis (node level). At this level, researchers can identify key actors based on degree centrality, betweenness centrality, and closeness centrality to measure their position and role within the narrative network.

Degree centrality refers to the identification of the most influential actors based on the number of connections they have with other actors in the network, which includes both in-degree and out-degree. In-degree refers to a relationship (link) initiated by others with a user, while out-degree refers to the relationship initiated by the user with others (Himelboim, 2017, p. 14). It means that in-degree measures the number of relationships from other nodes that lead to the key actor, while out-degree measures the number of relationships that the key actor initiates or is involved in with other nodes. Thus, to determine degree centrality, we can look at the number of incoming (in-degree) and outgoing (out-degree) links (Saxena & Iyengar, 2020). This is important for identifying key actors who can form, reach, and trigger chain responses from their connections with other nodes in the network. Furthermore, betweenness centrality refers to the evaluation of how often a node acts as an intermediary in connecting other nodes in the network, which is used to determine the position of key actors in the network. Betweenness centrality has a range of 0 to 1, where the highest value is 1 if the key actor is located on the shortest path (geodesic) from node A to node B. It can also have the lowest value (0) if the two nodes do not pass through the key actor or are not even connected in the network (Newman, 2010, p.186). This measure is important for understanding the influence of key actors on information control within a network. Finally, closeness centrality refers to the speed or ease with which a node in the network connects with other nodes. Closeness centrality can be measured using a geodesic function, resulting in a standardized index between 0 and 1(Wasserman & Faust, 1994, p. 185; Yuliana, 2010). It is essential to note that closeness centrality in a directed network is analogous to degree centrality, in that it requires consideration of the direction of the link, which is referred to as ingoing closeness and outgoing closeness (Wilder et al., 2022). If a node cannot reach other nodes (for example, all links lead out from node A and none in, or vice versa), then the closeness centrality value will be 0 (isolated). Therefore, influential actors in creating, shaping, and directing the narrative can be identified through centrality measurements based on the Social Network Analysis (SNA) framework.

SNA can be defined as a way to understand and analyze the positions of actors (nodes) and the connections between accounts (links or edges) in a network that can influence the dissemination of information. Network

analysis demands a serious commitment that prioritizes actor connectivity by emphasizing the structured relationships between social entities (Knoke & Yang, 2020, p.4). In a network, there are not only nodes, but also links or relationships. Links in a narrative network can be viewed from their reciprocal nature and their directional nature. Reciprocity is a bond that indicates two-way communications among the total number of links, while directionality is defined as a structure involving three nodes (triads) in the network, and the relationships between these nodes have a specific direction (Ramadhan & Hartanto, 2023; Wasserman & Faust, 1994, p.243). However, this study only focuses on reciprocal links because it wants to see key actors that play a central role in the narrative network through comments, "replies," or "mentions". Comments are defined as communication that is intended to be seen by other people and is reactive in nature, meaning it follows the response to something on social media, is short, and can be made in a matter of seconds, anywhere and at any time (Reagle, 2015, p.12). Therefore, reciprocity links become relevant in the development of new media because interactions, in the form of comments, reflect the dynamics of interconnected social networks while simultaneously forming narrative flows that influence public perception.

Networks can be linked to the development of new media, particularly Social Network Sites (SNS). In this case, SNS, also known as Web 2.0 applications, can help users build valuable networks through various information and resources (Irwansyah, 2023, p.5). In this context, SNS is a form of social media that creates social networks through specific forums without any spatial or temporal limitations, thus strengthening relationships between individuals (Pesik, 2022). One of the Social Network Sites (SNS) platforms is Instagram, which researchers chose because it contains many active actors connected in certain discussions, thus forming a network. Instagram allows various actors to conduct influence operations through their accounts, so it is important to consider the classification of actors based on account usage patterns, considering that many users build profiles to discuss, comment, and form forums on SNS (Farzam et al., 2023; Light, 2014). Instagram as SNS is the right choice for researchers to analyze the narrative network of the Polri reputation on @korlantaspolri.ntmc, because it is a platform for building or maintaining social relationships and interaction between users to form a narrative network in the form of comments. Comments on social media are one of the recontextualized by YouTube, Facebook, X, and Instagram users to convey personal emotions, prejudices, beliefs, opinions, and secrets (Meikle, 2016, p.12). Therefore, comments provided by the public need to be made wisely, especially when forming networks on Instagram.

In general, Instagram, as an SNS, is a platform that connects and builds social networks through two-way interactions, such as comments, likes, replies, and reposts. This research focuses on the Instagram account @korlantaspolri.ntmc, specifically the feed post "Member of the Indonesian House of Representatives Habiburokhman: This is the Smoothest Homecoming in History," as it has the most comments related to the discussion of Operation Ketupat 2025. Narratives about the Polri are shaped through user interactions, where key accounts are not only active in commenting but also have a significant influence on public opinion and the Polri's reputation on Instagram. This means that the presence of certain commenting accounts has the potential to form a narrative network and influence the reputation of the Polri within the community. Additionally, key actors in this network also hold central positions in shaping narratives that can influence other users. Therefore, this study aims to analyze the narrative network of the Polri's reputation on Instagram @korlantas.ntmc to identify key actors who hold central positions in creating, building, and disseminating narratives.

METHOD

This research approach is a mixed-method that focuses on utilizing quantitative and qualitative strengths, thus gaining a more comprehensive understanding of complex research phenomena (Creswell & Clark, 2018, p.613). It is important to note that mixed methods (MM) have their strengths and weaknesses, where quantitative SNA is often too abstract regarding the content exchanged, while qualitative SNA often forgets the general overview regarding the nature of the network (Froehlich et al., 2020, p.31). Therefore, mixed methods are highly relevant in measuring the (social) complexity found in educational research. In this case, researchers integrate convergent or concurrent mixed-methods designs. This design refers to researchers combining qualitative and quantitative data, usually collected concurrently, to provide a comprehensive analysis of the research problem and then integrating this information for interpretation(Creswell & Creswell, 2018, p.52). A qualitative approach to analyze the content related to the account that commented on the @korlantaspolri.ntmc account and its narrative, especially on the feed "Member of the Indonesian House of Representatives Habiburokhman: This is the Smoothest Homecoming in History". This account was chosen

because of its large number of followers, which can influence others, and was recorded on May 13 (2025). @korlantaspolri.ntmc had 430,000 followers. The number of followers on one Instagram account can influence other followers to trust the account, and the @ntmc_polri account provides information about traffic to the public (Wardhania & Herlina, 2021). The researchers then integrated a quantitative approach by measuring network centrality (degree, betweenness, and closeness centrality) to identify key actors in the Polri reputation narrative network on Instagram (@korlantaspolri.ntmc). The network measurement was carried out using Gephi 0.10.1, which automates the calculation of centrality indicators. As explained, the quantitative approach includes careful measurement with numeric quantitative database elements in order to answer questions and hypotheses based on theory (Creswell and Creswell, 2018, p. 206). Thus, the quantitative approach is used to measure the numerical (measurement) aspects of the network objectively, while the qualitative one is used to interpret the characteristics of key actors and the narratives they carry.

This study uses a qualitative descriptive research type. In social network analysis (SNA), descriptive is one of three types of research methods: *First*, descriptive methods to easily calculate network statistics (centrality or transitivity); *Second*, procedure-based analysis based on complex algorithms (such as cluster analysis); and *Third*, statistical modeling based on probability distributions (such as exponential random graph models) (Carrington et al., 2005, p.274-275). However, this study only uses descriptive methods to explain the network visuals from Gephi 0.10.1 more easily. The data collection technique was in the form of observation of the Polri reputation narrative network on Instagram @korlantaspolri.ntmc. This research observation focuses on the network to identify key actors and is non-participatory because the researcher is not directly involved in the phenomenon being studied (Romdona et al., 2025). This means that researchers only observed comments and usernames on Instagram without participating in the discussions. Data was collected using the IGcomment.com tool, allowing researchers to extract comments, like counts, created comments, and usernames for subsequent analysis.

The data analysis technique used was narrative network analysis. However, prior to this, the researchers first manually analyzed the content (comments and accounts on the feed "Member of the Indonesian House of Representatives Habiburohkhman: This is the Smoothest Homecoming in History") to draw valid and replicable conclusions from texts or other meaningful materials within their context (Krippendorff, 2019, p.24). Next, a narrative network analysis was carried out, which adapted SNA to discuss two fundamental approaches, namely, whole network and ego network analysis (Daly, 2010, p.24). However, this research only focuses on the complete network because it employed the actor (single) level of analysis, apart from groups and systems (Eriyanto, 2014, p.165). In this study, we will discuss in detail how the key actors in the Polri reputation narrative network on Instagram @korlantaspolri.ntmc are based on three levels, including: *First*, degree centrality; *Second*, betweenness centrality; and *Third*, closeness centrality. Network analysis is a way to identify the communication structure in a system that includes the arrangement of components and subsystems (Yuliana, 2010). The technical analysis of networks is formulated to identify and describe communication structures (Rogers & Kincaid,1981, p.139). Therefore, it is important to understand a network as a connection between individuals (nodes) connected through communication relationships (links), thus forming interaction patterns that can be analyzed comprehensively. The following are the findings and discussions the researchers have conducted.

RESULT AND DISCUSSION

The whole network is the focus of the discussion because it uses a single actor level of analysis. Researchers identify key actors through three main measures of SNA: degree centrality, betweenness centrality, and closeness centrality. In the whole network, researchers use a directed graph because Instagram comments are directed, which methodologically serves to determine key actors and their communication patterns (Himelboim, 2017, p.3). A directed graph is characterized by arrow-shaped links, namely, to represent the relational phenomenon of "being the parent of" or "giving advice to" (Borgatti et al., 2024, p.14). Thus, the use of a directed network facilitated the researcher's identification of key actors and the mapping of relationships within the entire network on Instagram @korlantaspolri.nmtc. The following are the findings obtained by the researcher using the Gephi 0.10.1 tool, along with their analysis.

Key Actors in the National Police's Reputation Narrative Network on Instagram @korlantaspolri.nmc Based on Degree Centrality
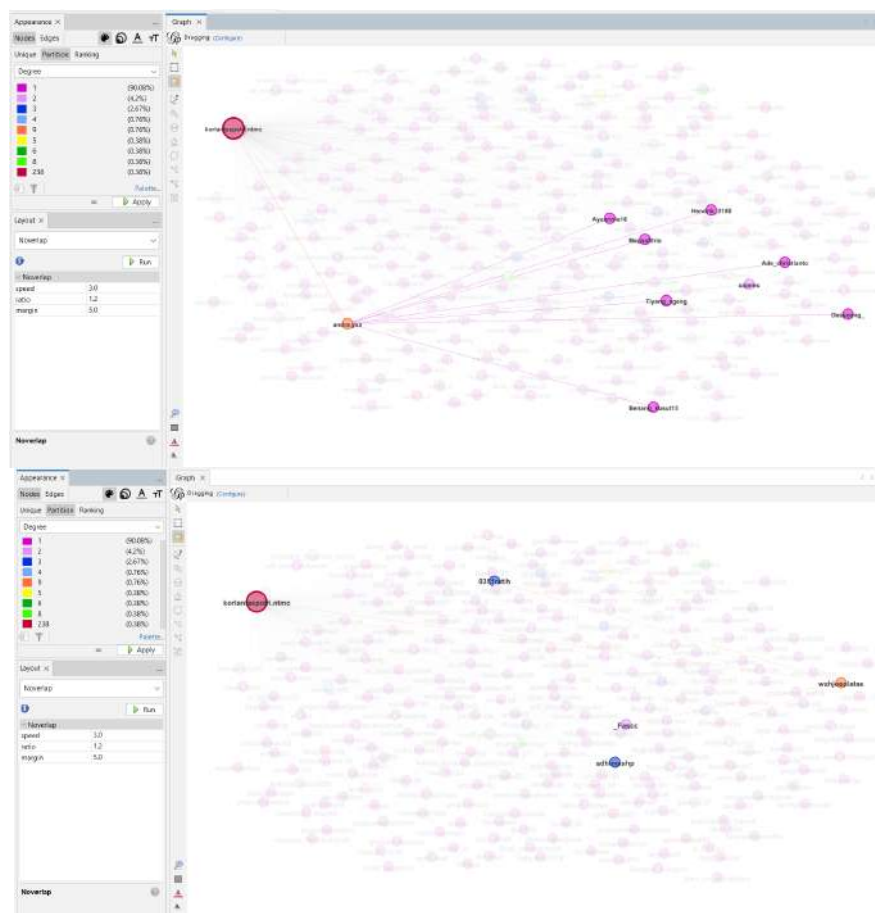
Figure 1. Degree centrality of key actors @andra.ysa and @wahjoeplatae
Source: Processed by researchers using Gephi 0.10.1

In Figure 1, the accounts with the highest degree centrality are @andra.ysa and @wahjoeplate, marked in orange. Both accounts have the highest value (9.0), which indicates the greatest level of direct connectedness in the Polri reputation narrative network on Instagram @korlantaspolri.ntmc, and can be said to be key actors. In this case, the degree centrality of both accounts is determined by the number of in-degree and out-degree links with other nodes in the network. In-degree links to @andra.ysa amount to 8 links from nodes @benang_kusut15, @desyooong_, @tiyang_ageng, @aajems, @ade_christianto, @megaafitria, @hendrik_0188, and @ayuerinie18, then the out-degree link is 1 link to node @korlantaspolri.ntmc. On the other hand, the in-degree of @wahjoeplatae is 4, coming from the nodes @adhimashp, @_fascc, @0351ratih, and @wahjoeplatae itself. This indicates that @wahjoeplatae also provides comments on itself. Then the out-degree number is 5 to the nodes @0351ratih, @adhimashp, @_fascc, @wahjoeplatae, and @korlantaspolri.ntmc. Thus, both @andra.ysa and @wahjoeplatae are key actors because they have the highest degree centrality value in the Polri reputation narrative network on Instagram @korlantaspolri.ntmc.

According to Alamsyah et al. (2023), degree centrality is a network analysis metric used to identify the importance of a node's centrality based on the number of connections (links) for communication and interaction between other nodes in the network. This means that researchers need to measure the involvement of nodes in the network, where in-degree centrality reveals popular actors, while out-degree centrality focuses on the expansion of the popular actor's network (Prell, 2012, p.113). A high in-degree value indicates that these two key actors are frequently the target of interactions (mentions or replies) from other actors (nodes), while out-degree refers to interactions initiated by these two key actors to other nodes. In the narrative network

of the Polri's reputation on Instagram (@korlantaspolri.ntmc), the accounts @andra.ysa and @wahjoeplatae are related to forming opinions from other nodes in the feed, such as "Member of the Indonesian House of Representatives Habiburohkhman: This is the Smoothest Homecoming in History". This indicates that every comment given by these two key actors has the potential to reach many other nodes in the network and trigger ongoing responses due to the many direct connections between @andra.ysa and @wahjoeplatae with other actors. Based on this, degree centrality suggests that these two key actors serve as both popular actors and initiators of interactions, capable of triggering a series of responses and shaping the narrative's direction. After identifying the key actors based on degree centrality measurements, the researcher explained the Instagram profiles of the two key actors.
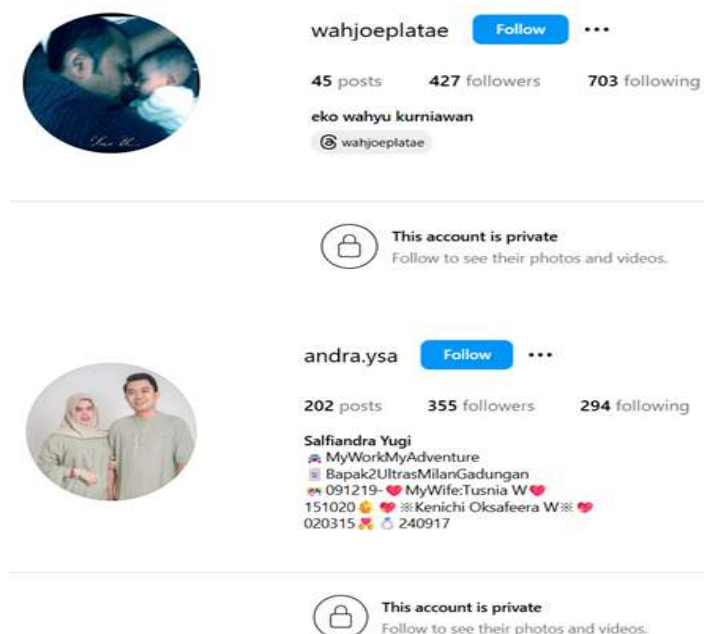
Figure 2. Instagram Account Profiles @andra.ysa and @wahjoeplatae
Source: Instagram @andra.ysa and @wahjoeplatae

In Figure 2, it appears that the key actor @andra.ysa has the full name Salfiandra Yugi. Judging from his Instagram bio, @andra.ysa appears to be a married male. Additionally, @andra.ysa has 202 posts, 355 followers, and 294 following. Then, the account @wahjoeplatae belongs to a man named Eko Wahyu Kurniawan. It is known from the Instagram profile @andra.ysa that they have a child, 45 posts, 427 followers, and 703 following. Both key actors, @andra.ysa and @wahjoeplatae, have no further information available because they are private accounts. Based on the researcher's findings and analysis, it was discovered that both accounts, although not influencers or public figures, can be key actors because their comments trigger narratives from other nodes in the network. The following comments from key actors received more responses from other nodes or actors in the narrative network.

Table 1 shows comments from key actors @andra.ysa and @wahjoeplatae that triggered the narratives of other nodes in the network. Key actor @andra.ysa criticized @korlantaspolri.ntmc regarding bottleneck congestion as a result of the arrangements made by the National Police on March 27, 2025. This invited comments or narratives from other nodes in the network, such as @aajems, @megafitria, and @hendrik_0188, who agreed with @andra.ysa's comments. Then there are also narratives from @ade_christianto, @ayuerinie18, @desyoong_, and @mung_wayangegusti_15 who recounted unpleasant homecoming (*mudik*) experiences because the field facts showed hours of traffic jams, rest areas were not opened, and questioned Habiburohkman's knowledge regarding the definition of smooth. However, there were also comments opposing @andra.ysa, stating that, compared to last year, this year was smoother for @tiyang_ageng. On the other hand, key actor @wahjoeplatae expressed appreciation to the National Police for the one-way schedule arrangement that resulted in a smooth homecoming. This comment received various replies or mentions. Some disagreed because they felt the traffic jam lasted up to 29 hours (@adhimashp), then doubted @andra.ysa's

statement regarding 26 hours being considered smooth by @_fascc, or felt that the homecoming (*mudik*) was smooth because the date was chosen differently from other homecoming travelers (@0351ratih). This indicates that the feed upload, which can be interpreted in terms of data and field facts, does not align with what was conveyed by the Member of the Indonesian House of Representatives (Habiburohkman), ultimately prompting the public (netizens) to respond to the feed with contradictions and creating a viral effect.

Table 1. Comments from Key Actors with Other Nodes in the National Police Reputation Narrative Network on Instagram @korlantaspolri on the feed "Member of the Indonesian House of Representatives Habiburohkhman: This is the Smoothest Homecoming in History."

Key Actor Comments @andra.ysa	Reply or Mention
@korlantaspolri.ntmc, try going home on March 27, 2025, sir; the chaotic arrangements will result in bottleneck traffic jams lasting for hours.	@andra.ysa is absolutely right, sis. (@aajems) @andra.ysa does not understand the concept of fluency. (@ade_christianto) @andra.ysa agrees. (@megafitria) @andra.ysa, maybe when she passed by, things went smoothly because it was sterile. We were stuck between Jakarta and Kebumen for 17 hours. Awesome. (@ayuerinie18) @andra.ysa's real record-breaking 17-hour journey was due to this policy. The Brebes rest area was temporarily closed. Did he manage to use the police escort? (@desyoong_) @andra.ysa, compared to last year, this year is much better, sir. (@tiyang_ageng) @andra.ysa spent 6 hours in Cipali alone. (@mung_wayangegusti_15) @andra.ysa is absolutely right, Jakarta to Semarang takes 12 hours. (@hendrik_0188)
Key Actor Comments @wahjoeplatae	**Reply or Mention**
@korlantaspolri.ntmc Thank you for the scheduling. Our trip from Madiun to Jakarta went smoothly, and our return trip was also smooth.	@wahjoeplatae went home on the 7th, returned on the 2nd. @wahjoeplatae You are going back home, sir. (@0351ratih) @0351ratih 2023 I went home from Madiun to Jakarta for 26 hours due to *a one-way ticket*. (@wahjoeplatae) @wahjoeplatae this is what I'm feeling right now, uncle. Surabaya to Bekasi takes 29 hours to get home, and 5 hours to return. It is a *one-way trip*. (@adhimashp) @adhimashp, wow, I am fed up. (@wahjoeplatae) @wahjoeplatae, 26 hours can be commented as smooth? (@_fascc) @_fascc 2023 Uncle, yesterday I traveled home for 9 hours and returned in 8.5 hours, including rest. (@wahjoeplatae)

Source: Researcher's analysis using data from IGcomment.com

Based on this, the interaction between actors in the network not only reflects personal experiences related to homecoming (*mudik*) but also shows the formation of narrative polarization, both supporting and criticizing the National Police. This finding indicates that key actors @andra.ysa and @wahjoeplatae play a strategic role as opinion leaders who trigger broader narratives, shape the direction of public opinion, and strengthen or change perceptions through intense connections with other nodes in the Polri reputation narrative network on Instagram @korlantaspolri.nmtc. These findings deepen our understanding that the reputation of the Polri is shaped not only by content but also by the frequency and pattern of connections between actors, indicating the level of public participation in certain issues. Contextually, the reputation of the Polri on Instagram can be influenced by actors with extensive and active connections. The more frequently key actors interact or are mentioned in conversations, the greater the exposure, legitimacy, and perception of the institution. Actors with high degree centrality values indicate who is most active in conversations about the Polri, having affiliations and involvement with various other nodes, so that interactions often give rise to diverse views and debates among netizens. These dynamics also influence the formation of narratives about the Polri, as discussions within the network focus not only on the issue of going home for Eid but also touch on the credibility, performance, and reputation of the Polri more broadly in the digital space. This is also supported by Pierri et al. (2020), who found that misleading information on X is easier to spread in small, connected

circles because it is disseminated by certain people and tends to form communities, so messages are easily repeated within that circle. Therefore, these two key actors occupy a central position that enables them to play a significant role in shaping and directing the flow of conversation, influencing the public narrative regarding Polri's reputation on Instagram. Next, the researcher looked at betweenness centrality in the narrative network of the Police's reputation on Instagram.

As seen in Figure 3, both @andra.ysa and @wahjoeplatae have a betweenness centrality value of 0.0131 or 1.31%, which is marked in blue. The key actor @andra.ysa acts as an intermediary between 8 other nodes to @korlantaspolri.ntmc. The paths are: @hendrik_0188, @megaafitria, @desyooong_, @benang_kusut15, @aajems, @ade_christianto, @ayuerinie18, and @tiyang_ageng to @andra.ysa, then to @korlantaspolri.ntmc. In this case, @hendrik_0188, @megaafitria, @desyooong_, @benang_kusut15, @aajems, @ade_christianto, @ayuerinie18, and @tiyang_ageng (in purple) show a betweenness centrality value of 0.0. Then @wahjoeplatae becomes an intermediary for 3 other nodes to @korlantaspolri.ntmc. The path is: @adhimashp, @_fascc, and @0351ratih to @wahjoeplatae, then to @korlantaspolri.ntmc. In this case, @adhimashp, @_fascc, and @0351ratih (in purple) show a betweenness centrality value of 0.0.

Key Actors in the Narrative Network of the Indonesian National Police's Reputation on Instagram @Korlantaspolri.ntmc Based on Betweenness Centrality
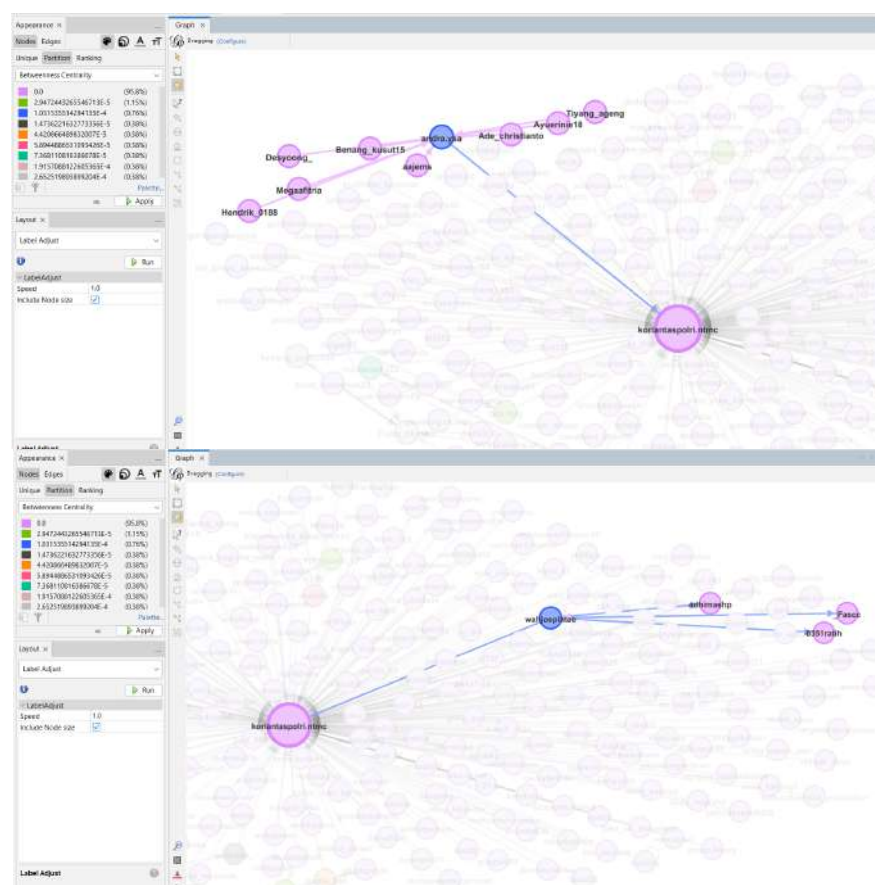
Figure 3. Betweenness centrality of key actors @andra.ysa and @wahjoeplatae
Source: Processed by researchers using Gephi 0.10.1

A betweenness centrality value of 0.0 indicates that the node or account has no intermediate value. Furthermore, based on the 0 to 1 range in betweenness centrality, a value of 0.0131 can be considered relatively low. This means it still retains an intermediate value but is not particularly strong. As explained, the highest betweenness centrality value is 1 if the key node is located on the geodesic path (shortest path) from node A to node B. If the two nodes do not pass through the key node or are not even connected in the network, the value will be 0 (Neuman, 2014, p.186). It means that the role of these two key actors is not only about the number of links, but also their strategic position in the flow of information between parts of the network. This

expands the use of betweenness centrality, which was initially focused on the realm of graph computing, but has now been developed and implemented more widely in various specific applications, including social network analysis (Mirakyan, 2021). Thus, betweenness centrality provides a deeper understanding of the flow of information and public opinion formed in the Polri reputation narrative network, where the strategic position of certain actors can determine the direction, intensity, and spread of narratives on Instagram @korlantaspolri.ntmc.

These findings confirm that an institution's (Polri) reputation on Instagram is shaped not only by the frequency of public engagement but also by the strategic position of key individuals or accounts in controlling the flow of narratives on the network. Contextually, these results deepen our understanding that the Polri's reputation on Instagram can change dynamically depending on the intermediary actors who bridge, channel, filter, or even change the direction of public conversations related to the institution. In this regard, the role of Polri's public communications is necessary to contribute positively to shaping comments as a thoughtful counter-opinion. By serving as key actors connecting the scattered nodes, @andra.ysa and @wahjoeplatae are seen as the primary bridges for narratives and comments. Therefore, narratives passing through them are likely to be more widely disseminated and influential. Therefore, this position is crucial in the reputation narrative network because key actors can direct, hinder, or accelerate the spread of opinions about Polri. Furthermore, the researchers examined closeness centrality in the Polri reputation narrative network on the Instagram account @korlantaspolri.ntmc.

Key Actors in the National Police's Reputation Narrative Network on Instagram @Korlantaspolri.ntmc Based on Closeness Centrality
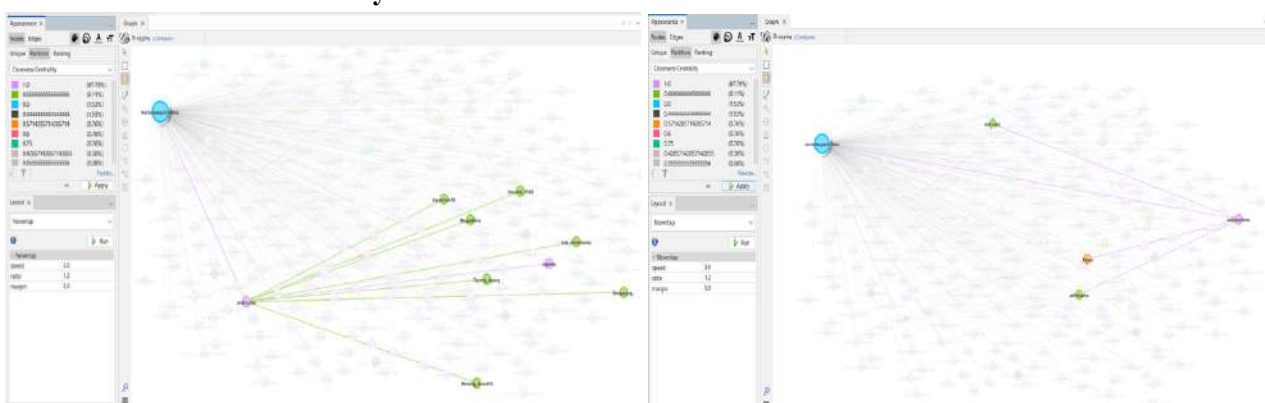
Figure 4. *Closeness centrality* aktor kunci @andra.ysa dan @wahjoeplatae
Source: Olahan peneliti menggunakan Gephi 0.10.1

Based on Figure 4, closeness centrality in this study shows that @aajems and @andra.ysa have the highest value (1.0), marked in purple. This indicates maximum closeness to other nodes. In this case, the key actor @andra.ysa accesses @aajems the fastest compared to other nodes. This is because other nodes have a lower value (0.666) marked in moss green, so their position is further away or not as fast as @aajems to reach. Then @wahjoeplatae has the highest closeness centrality (1.0), placing it in the most strategic position because it can reach all other nodes with the shortest average distance. @adhimashp and @0351ratih can be reached faster, while @_fascc (0.571) in orange is slightly further away, and @korlantaspolri.ntmc (0.0) in blue is not directly connected because it acts as a source of one-way discussion with the key actor @wahjoeplatae. This condition indicates that @korlantaspolri.ntmc cannot reach other nodes in the network structure. Closeness centrality indicates how quickly and effectively a node can reach other nodes in the network. Therefore, actors with high closeness centrality will also be seen as nodes that can more easily mobilize the network because they can more easily reach everyone in the network (Prell, 2012, p.107).

It has been previously explained that degree centrality is a crucial measure for evaluating the influence of a node based on its accessibility within a network (Mahyar et al., 2019). This is an important foundation in analyzing degree centrality. Based on the findings, key actors @andra.ysa and @wahjoeplatae have a closeness centrality value of 1.0, meaning they have the shortest structural distance to all other nodes in the network. Based on the interval of 0 to 1 in closeness centrality, a value of 1.0 represents the highest or maximum closeness centrality. This means that the two key actors are the closest nodes to other nodes in the

network. As explained, a node with a maximum closeness centrality value indicates that the node has the minimum distance to other nodes in the network (Adniati et al., 2023). This is due to the position of the two key actors being in the middle of the network structure, so that they efficiently reach all nodes, and the small structural distance to other nodes enables key actors to directly interact with other nodes. Thus, @andra.ysa and @wahjoeplatae are interpreted as nodes with the highest closeness centrality value because they have the fastest access to other nodes, the most established routes to access other nodes, and high visibility to be aware of events occurring in the network (Susanto et al., 2012). Therefore, these two key actors are involved in mobilizing and spreading narratives more effectively than other nodes with lower closeness centrality values.

These findings reinforce the understanding that closeness centrality not only reflects the efficiency of communication within the network but also illustrates the ability of key actors to influence the construction of the Polri's reputation through their proximity to various sources of information and opinion. This indicates how structurally close a node is to other nodes in the network. The higher the closeness centrality, the faster the actor can access or reach other nodes. Contextually, this indicates that the Polri's reputation on Instagram is strongly influenced by actors who have fast and broad access to the network, because these actors can determine the intensity of the spread of public narratives. Thus, key actors @andra.ysa and @wahjoeplatae play a crucial role in accelerating the spread of opinions, influencing public perception, and directing the dynamics of discussions within the Polri reputation narrative network on Instagram.

Based on the findings related to the two key actors in degree, betweenness, and closeness centrality, the central position (key actor) forms, directs, and determines public opinion, so that the content related to the dynamics of netizen opinion needs to be watched out for. This is apparently supported by studies, Putera et al., 2021; Setiamukti & Nasvian, 2023 emphasize the importance of a central position in controlling the flow of information and shaping public opinion, while also considering the context of Instagram as a platform for reputational narratives. The need to optimize the role of the National Police's public relations as a crisis management department. This differs from previous research that focused more on sentiment analysis (Ho et al., 2024). This research further confirms that network structure and actors' centrality positions are closely related in determining the effectiveness of narrative dissemination. Therefore, network patterns are key to understanding the dynamics of digital communication and institutional reputation management. Furthermore, the focus on narrative networks on Instagram demonstrates interactions between communities that influence public opinion. This means that narratives that receive more attention through likes, replies, and reposts have the potential to attract other narratives from different actors, becoming the focal point of discussion and influencing the direction of the conversation. Further attention can also occur when an influencer account appears to convey a specific message, thus strengthening the message and influencing public opinion on the digital platform with which it is connected (Arianto & Risdwiyanto, 2021). As networks are used in all kinds of operational ideas of density, sociograms, and individual centrality to reveal the constraints that form networks between "nodes" and "links" in graph theory (Scott, 2012, p.12). This creates a phenomenon where certain comments are heard more than others. The combination of these three metrics confirms that the centrality of these two actors lies not only in the number of connections, but also in their effectiveness and speed in controlling the flow of information and influencing public perception of the Polri's reputation on Instagram. Thus, these findings not only support but also broaden our understanding of the role of "actors or nodes" and "relationships or links" in the network, in terms of degree centrality, betweenness centrality, and closeness centrality, in influencing the Polri's reputation on Instagram.

Furthermore, the relationship between the findings of the narrative network analysis and the public communication strategy of the Indonesian National Police Public Relations Division also demonstrates a complementary relationship between actors and institutional digital communication practices. The implementation of the functions of the Multimedia Bureau of the Indonesian National Police Public Relations Division is regulated in Regulation of the Head of Division No. 1 of 2024 concerning Standard Operating Procedures (SOP) within the Public Relations Division of the Republic of Indonesia National Police. Public Relations, in this case, plays a role as the vanguard of the Indonesian National Police's public communication. Its functions relate to digital and electronic communication, improving information technology resources, production, and analysis of multimedia development, implementing media monitoring, managing media crisis issues, both digital and electronic, and disseminating digital information in the form of online media or social media to become a two-way channel for creative and effective communication. In implementing the Multimedia Bureau policy of the Indonesian National Police Public Relations Division, these findings align

with the creative and effective management of two-way digital communication through the production, analysis, and dissemination of information on social media (Instagram). However, the analysis results indicate a complex dynamic between the findings and the ideal public opinion of the Polri, which ultimately creates a negative reputation. Key actors with central positions (@andra.ysa and @wahjoeplatae) in the narrative network actually accelerated the spread of negative comments and sentiments against the Polri, indicating that the strength of the network on social media is not always directly proportional to the direction of communication expected by the institution. Therefore, this finding confirms that the public communication strategy of the Indonesian National Police Public Relations Division should not only focus on the intensity of message dissemination, but also requires perception management and mitigation of negative opinions in the digital public space. Thus, narrative network analysis can be used as an early detection tool for reputational issues, helping the Indonesian National Police Public Relations Division design a more responsive, participatory, and adaptive communication strategy to address interaction patterns and the spread of narratives on social media.

CONCLUSION

This study identifies key actors in the narrative network surrounding the reputation of the Indonesian National Police (Polri) on Instagram @korlantaspolri.ntmc, particularly in the feed titled *"Member of the Indonesian House of Representatives Habiburokhman: This is the Smoothest Homecoming in History."* The analysis reveals that @andra.ysa and @wahjoeplatae occupy central positions based on degree centrality, betweenness centrality, and closeness centrality. Their strategic roles enable rapid and effective dissemination of narratives that shape public perception of Polri. However, their involvement often contributes to negative reputational outcomes, as comments highlight issues of institutional capability and integrity.

The role of these actors is crucial in mobilizing public opinion within the narrative network. Therefore, media monitoring and crisis management must be optimized by Polri's public relations through counter-opinions that balance negative narratives with constructive communication. Opinion leaders should internalize the four basic consensuses of the nation—Pancasila, the 1945 Constitution, the Unitary State of the Republic of Indonesia, and Bhinneka Tunggal Ika—so that their contributions remain constructive, avoiding provocation and unrest.

The feed itself can be interpreted in two ways. First, literally, as an expression of appreciation for Polri's success in Operation Ketupat 2025, which is considered historic. Second, based on reality, where traffic congestion and closed rest areas created frustration among travelers. These contradictory interpretations triggered viral responses, producing both positive and negative narratives. Such paradoxes highlight the importance of maturity among social media users in responding to information. Data and facts must be analyzed wisely to prevent unnecessary conflict.

Beyond the influence of key actors, social media ethics rooted in national values are essential. Narratives shaped by individuals with knowledge and spiritual awareness tend to align with the wisdom of Pancasila's first principle. Similarly, narratives grounded in peace, unity, and harmony foster constructive communication. Thus, the formation of Polri's reputation in digital spaces requires social maturity and ethical responsibility.

The findings confirm that network structures and key actors significantly determine narrative formation and dissemination. Although the feed carries a positive literal meaning, its paradoxical nature reflects misalignment between content and reality. Expectations from social media content do not always match outcomes, as factors such as actor influence, user knowledge, and social interaction shape narratives. Ultimately, Polri's reputation must be built upon the four basic consensuses to strengthen unity, uphold national values, and maintain public trust amid dynamic digital opinion.

SUGGESTION

This study faces limitations in data collection tools, particularly in gathering comments and hashtags on Instagram, which require complex registration across multiple applications. Social Network Analysis (SNA) measurements also present constraints. Moreover, the study only examined one feed post on Instagram (@korlantaspolri.ntmc), meaning the findings cannot fully capture the broader dynamics of public narratives regarding Polri's reputation across different post formats (feeds, reels, snapgrams) or other social networking

platforms. Based on these limitations, two recommendations are offered: academic and practical.

Academically, future research should refine narrative network analysis by improving the use of data collection tools, including scraping methods and more comprehensive approaches to comments and hashtags across platforms. Expanding the literature on SNA is also crucial, with clearer explanations of formulas, measurement intervals, and additional indicators such as Harmonic Closeness Centrality. Developing a holistic framework will make research more comprehensive and accessible. Longitudinal data should also be employed to capture temporal dynamics, enabling deeper observation of changes in narratives, sentiments, and public interactions over time. Reputation formation must be understood as reciprocal, shaped by both narrative creators and subjects, requiring mutual understanding and exemplary behavior in attitudes, actions, and communication.

Practically, the findings provide Polri with insights into its reputation on Instagram, encouraging internalization of Tribrata values: protecting, nurturing, and serving; maintaining security and order; and enforcing the law professionally, transparently, and responsibly. These values must be rooted in the four basic consensuses—Pancasila, the 1945 Constitution, NKRI, and Bhinneka Tunggal Ika—as guiding principles. Policy implications highlight the need for stronger public communication strategies on digital platforms that are responsive, participatory, and vigilant against provocation, while offering narrative arguments grounded in public data. Polri must also monitor personal accounts influencing perceptions and conduct evaluations based on feedback to generate counter-opinions. Social media users, meanwhile, should exercise caution, respond wisely, and promote constructive interactions that strengthen reputation and social cohesion rather than division or discrediting institutions without evidence.

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The Sovereignty and Kinship Challenge:
Addressing Indonesia-Timor Leste Border Security in the Post-Conflict Era

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Abstract

Border security in post-conflict regions faces fundamental paradoxes between state sovereignty and socio-cultural realities. This study examines the Indonesia-Timor Leste border security in Belu Regency through the qualitative method using a case study design. The data were obtained from literature reviews, interviews with 11 key informants from security institutions, and secondary sources that are relevant to the study. Findings reveal three simultaneous border typologies—antecedent, subsequent, and superimposed boundaries—creating structural complexities beyond technical solutions. Kinship networks function as double-edged swords: they provide social capital for reconciliation, yet vulnerabilities are exploited for transnational crime when security policies overlook the social legitimacy of these networks. Institutional coordination remains reactive-informal, relying on personal relationships rather than systematic integration. The study extends Portes' social capital theory by demonstrating how state policies themselves transform social capital into security liabilities. Three practical recommendations emerge: reactivating biometric-based Border Crossing Permits with guaranteed accessibility, developing integrated Border Management Systems connecting six agencies, and institutionalizing community-based border management. Comparative lessons from Indonesia-Malaysia borders confirm that effective security requires balancing territorial sovereignty with legitimate community needs through formal coordination platforms and soft border approaches.

Keywords: post-conflict borders, border typology, social capital, institutional coordination, Indonesia-Timor Leste, transnational crime

INTRODUCTION

State borders in the post-conflict era present a fundamental paradox. On one hand, political boundaries necessitate the enforcement of sovereignty and strict security controls; on the other hand, the socio-cultural realities of society allow for mobility and cross-border interactions that cannot be completely restricted by lines on a map. This phenomenon is not new in international border studies. The experience of the Northern Ireland-Republic of Ireland border after the 1998 Good Friday Agreement illustrates that reconciling state security demands with local communities' mobility needs requires a more complex approach than simply deploying guard posts and security personnel (O'Dowd, 2002). Similarly, Bosnia-Herzegovina's borders with

Serbia and Croatia, after the Bosnian War, demonstrate that ethnic ties and cross-border kinship can serve as both assets for reconciliation and sources of security vulnerability if not managed carefully (Newman, 2006).

Indonesia's border with the Democratic Republic of Timor-Leste (DRTL) is another post-conflict border case that offers unique complexities for study. This border stretches 268.8 km in East Nusa Tenggara Province and is a result of a long and turbulent decolonization process. It reflects the colonial division created by the Dutch East Indies and Portuguese Timor through the Treaty of Lisbon of 1859 and the Hague Convention of 1913. The border underwent further changes during the controversial annexation of East Timor by Indonesia from 1976 to 1999, and it was ultimately re-established after East Timor's independence in 2002, leaving lasting traces of conflict on both sides (Simarmata et al., 2019). Over two decades after Timor-Leste's independence, portions of the border remain undelimited, including disputed areas in the Oekusi enclave and several neutral zones, making this region a natural laboratory for understanding dynamic border security issues in post-conflict contexts (Kase et al., 2018).

Studies on the management of the Indonesia-Timor Leste border in the past two decades have developed rapidly. However, the literature often emphasizes hard security aspects, such as troop deployments, infrastructure development, and the management of transnational crimes, including smuggling and human trafficking (Yahya et al., 2024; Gunawan et al., 2024). While these aspects are important, they overlook the socio-cultural dimensions crucial for effective border security. Previous studies have not thoroughly examined how the typology of colonial borders inherited by Indonesia and East Timor creates a structural dilemma for security. Colonial powers established these boundaries without considering settlement patterns, customary land ownership, and prior and superimposed boundaries, which now conflict with social realities that have evolved over centuries (Hartshorne, 1951; Newman, 2006).

Moreover, existing literature has not comprehensively analyzed how cross-border kinship ties, which ideally serve as social capital for fostering peace and cooperation, can also be double-edged swords in the context of border security. Social capital theory, as developed by Putnam (2000) and Coleman (1988), generally views social networks and norms of trust as positive assets for community cohesion and economic development. However, Portes (1998) highlights the dark side of social capital, noting that strong social networks can be misused to undermine broader collective interests, including facilitating transnational crime. In the context of the RI-DRTL border, familial, linguistic, and cultural ties between communities on both sides create informal mobility networks that are difficult for security forces to control. These networks are also susceptible to being exploited by criminals for smuggling illegal goods, undertaking undocumented border crossings, and facilitating undetected deportations (Raharjo & Pristiyanto, 2021; Palmer & Carvalho, 2021).

Finally, the literature has not adequately examined patterns of institutional coordination in border security. Managing the Indonesia-Timor Leste border involves multiple institutions with varying mandates and organizational cultures, including the Indonesian National Army (TNI), the National Police (Polri), the State Intelligence Agency (BIN), the Ministry of Law and Human Rights (Immigration), the Ministry of Finance (Customs), and the National Border Management Agency (BNPP). Multi-level governance theory emphasizes the importance of horizontal coordination among institutions and vertical coordination between central and local governments for addressing complex border issues (O'Dowd, 2002; Villanueva et al., 2022; Syafe'i et al., 2020). However, to date, there has been no in-depth study examining whether inter-agency coordination at the RI-DRTL border is systematic and effective or merely reactive and informal. This question is significant because the effectiveness of border security relies heavily on the integration of information, the speed of response, and the consistency of inter-agency policies (Villanueva et al., 2022).

To address this gap in the literature, this study poses three research questions as follows:

1. How does the typology of colonial borders—specifically antecedent, subsequent, and superimposed boundaries—affect the complexity of securing the RI-DRTL border?

2. How can cross-border kinship bonds be both beneficial and detrimental in terms of security, serving as social capital for peace while also presenting vulnerabilities that can be exploited by transnational crime?

3. Is the coordination among institutions such as the TNI, Polri, BIN, Immigration, and Customs systematic and planned or simply reactive and informal?

This study employs the qualitative method using a case study design in order to explore the complexity of securing the Indonesia-Timor Leste border from a socio-cultural and institutional perspective. Case studies were chosen because they allow for an in-depth analysis of contemporary phenomena in real-life contexts, particularly when the boundaries between phenomena and context cannot be strictly separated (Yin, 2018). This approach is relevant to understanding the paradox of border security involving the complex interactions between colonial legacies, cross-border kinship ties, and the dynamics of inter-agency coordination.

The authors utilize two primary data collection techniques: semi-structured in-depth interviews and document analysis. Face-to-face interviews, lasting 60-90 minutes, followed a protocol centered on border typology and colonial legacy, cross-border kinship ties, and institutional coordination patterns. This flexible approach allowed for exploration of emerging issues while focusing on the research questions (DiCicco-Bloom & Crabtree, 2006). With consent, all interviews were recorded and transcribed verbatim. Additionally, document analysis enriched the interview data by reviewing policy documents, border regulations, and bilateral agreements, using a critical hermeneutic approach to understand the historical and political contexts shaping current border security practices.

The qualitative data were analysed using a six-stage thematic analysis method by Nowell et al. (2017). The stages include: (1) familiarization through repeated readings of transcripts; (2) initial coding to identify relevant meanings; (3) theme search by grouping similar codes; (4) theme review for coherence and differentiation; (5) defining and naming the themes; and (6) report production with citations and analysis. To ensure validity, the study employed source triangulation by comparing data from various informants and institutions (Denzin, 1978), conducted member checking to confirm findings, and practiced reflexivity by documenting the researcher's assumptions that could influence data interpretation.

The research was carried out in the border area of Belu Regency, East Nusa Tenggara Province, which is directly adjacent to Bobonaro District, Democratic Republic of Timor Leste. The election of the Belu Regency was carried out purposively with three main considerations. First, this region has four official cross-border posts (PLBN Motaain, Motamasin, Wini, and Napan), which makes it the zone with the highest intensity of cross-border mobility on the RI-DRTL border. Second, Belu Regency faces complex cases of territorial disputes, especially related to the Oekusi enclave, which is an example of *a superimposed boundary*. Third, the region has the characteristics of very strong kinship ties between communities on both sides of the border, which makes it an ideal location to examine the paradox of sovereignty and kinship. Field data collection was conducted in July with one additional interview in September 2025.

The research informants were determined using *purposive sampling* techniques with criteria based on competence and experience (*criterion-based selection*). The main criteria include: (1) direct involvement in border security operations for at least one year; (2) have in-depth knowledge of the socio-cultural dynamics of border communities or institutional coordination issues; and (3) willing to provide information publicly with a guarantee of identity confidentiality. Based on these criteria, the study involved eleven key informants representing six border security institutions and one informant from border communities, namely: the TNI AD Pamtas Task Force (2 people), the Belu Resort Police (2 people), the State Intelligence Agency (1 person), the Indonesian National Army Navy (2 people), the Immigration Office (1 person), Customs (1 person), the PLBN Manager (1 person), and border community residents (1 person). The diversification of informant

institutions is intended to gain a comprehensive understanding from various institutional perspectives, while the inclusion of informants from border communities is intended to obtain *an emic* perspective (from within) on the dynamics of smuggling and cross-border mobility.

The complete categories of research informants are presented in Table 1. The distribution of informants reflects the diversity of institutions involved in border security, with representation from the TNI (36%), civil institutions such as Immigration, Customs, and BNPP (27%), the National Police and BIN (27%), and border communities (9%). The experience of informants from the security forces in the border areas varies between 6 months and 6 years, with an average tenure of 3.2 years, while informants from border communities have 26 years of experience living in the region. This diversity of backgrounds and experiences allows the research to capture a comprehensive perspective on the dynamics of border security from the perspective of *hard security*, intelligence, border administration, and the life experiences of people who are directly affected by security policies.

Table 1. Research Informant Profile

Code	Informant Categories	Sector	Experience in the Border Region
INF-01	Senior Security Officer	Security	<1 year
INF-02	Security Officer	Security	<1 year
INF-03	Senior Security Officer	Security	<1 year
INF-04	Security Officer	Security	3-5 years
INF-05	Intelligence Officers	Intelligence	1-3 years
INF-06	Security Officer	Security	3-5 years
INF-07	Security Officer	Security	3-5 years
INF-08	Government Officials	Government	1-3 years
INF-09	Government Officials	Government	3-5 years
INF-10	Government Officials	Government	5-7 years
INF-11	Border Citizens	Community	>20 years old

Source: Primary Data (2025)

THEORETICAL FRAMEWORK
Border Typology Theory
The study of border typology has undergone significant evolution since the seminal work of Hartshorne (1951), who classified borders based on temporal relationships with the development of cultural landscapes. Hartshorne identifies three main categories that remain relevant in contemporary analysis. *Antecedent boundaries* refer to the boundary lines established before the area was inhabited by a significant population or developed into an established cultural landscape. This type of border generally follows natural geographical features, such as mountains or rivers, drawn when the area is still relatively empty of human settlements. The border between the United States and Canada in the western region is a classic example, where a parallel line of 49° N was established before a great wave of migration and settlement construction (Newman, 2006).

The second category, *subsequent boundaries*, develops after the cultural landscape is formed and reflects existing patterns of settlement, ethnic distribution, or socio-economic realities. This type of border is generally the result of bilateral negotiations that take into account the existence of local communities, customary land ownership, and traditional trade routes. Recent research shows that subsequent boundaries tend to be more

stable and accepted by local communities because they accommodate ground realities (Palmer & Carvalho, 2021). However, the process of delimiting subsequent boundaries is often complex and time-consuming, involving complex compromises between various stakeholders. The third category, *superimposed boundaries*, is a boundary line imposed by external forces without considering existing cultural, ethnic, or geographical patterns.

Contemporary studies of African borders show that the superimposed colonial boundaries have created long-term consequences that are still felt today. Research by Paine et al. (2024) in *the American Political Science Review* reveals that the division of colonial territories in Africa is not entirely arbitrary, but rather reflects a systematic process influenced by the existence of precolonial states and certain geographical considerations. These findings challenge conventional views of Africa's "bad borders" and provide new nuances in understanding the colonial legacy. A parallel study by Müller-Crepon et al. (2025) in *the American Journal of Political Science* shows how ethnic geography and nationalism have shaped European borders since the 19th century, with ethnic boundaries increasing the conditional probability that two locations separated by those boundaries will become, or have become, separated by state borders.

In the context of post-conflict borders such as Indonesia-Timor Leste, these three categories often overlap. The Lisbon Line of 1859 and the Hague Convention of 1913 were essentially antecedent boundaries drawn by colonial powers (the Netherlands and Portugal) without in-depth consultation with the local population. However, as time went by and settlement developed, these borders took on subsequent characteristics as the people on both sides developed adaptations to the line. At the same time, these borders retain a superimposed character because they do not fully accommodate the pre-existing ethnic, linguistic, and kinship unity (Simarmata et al., 2019).

Social Capital and Border Security
The concept of social capital has become one of the most influential theoretical frameworks in contemporary social science since it was popularized by the work of Putnam (2000) and Coleman (1988). Social capital refers to a network of social relationships, mutual norms, and trust that facilitates coordination and cooperation for mutual benefit. In the context of economic development and social cohesion, social capital is generally seen as a positive asset that increases collective efficiency and reduces transaction costs (Putnam, 2000). However, the critical literature on social capital has identified what Portes (1998) calls the "dark side of social capital"—how strong social networks can produce negative consequences. In a seminal article in the *Annual Review of Sociology*, Portes identified four potential negative consequences of social capital. Closed networks can exclude outsiders and limit access to opportunities. Strong social bonds can create excessive demands on successful group members. Group norms can limit individual freedom and innovation. In border security studies, social networks can be exploited for illegal purposes or harm the broader public interest.

In the context of borders, social capital has ambiguous implications for security. On the one hand, cross-border kinship ties can facilitate post-conflict reconciliation, promote informal trade that provides livelihoods for marginalized communities, and create networks of trust that reduce tensions. A study of the Indonesia-Timor Leste border by Palmer & Carvalho (2021) shows how identity politics and cross-border kinship bonds create a complex sense of belonging, in which border communities identify themselves within frameworks that transcend nation-state boundaries.

On the other hand, the same social ties can be security vulnerabilities. Kinship and trust networks can be exploited by transnational criminals to facilitate smuggling, human trafficking, or illegal movement across borders. Research on other borders shows a similar pattern. In the context of the U.S.-Mexico border, family and community networks have been leveraged by criminal organizations for trafficking operations. On the

borders of Eastern Europe, ethnic and linguistic ties are used to facilitate a shadow economy that avoids state control.

Social capital analysis at the border becomes more complex because the dividing line between "legal" and "illegal" activities is often blurred from the perspective of local communities. Practices that are considered illegal by the state, such as undocumented cross-border trade or *unofficial crossing points*, may be seen as legitimate habits or even survival needs by border communities that have practiced them for generations (Raharjo & Pristiyanto, 2021). This creates a dilemma for security policymakers about how to manage cross-border mobility without alienating local communities or damaging their livelihoods.

Institutional Coordination in Border Management

Modern border management involves multiple agencies, each with different mandates, organizational cultures, and operational procedures. The theory of multi-level governance, developed by European scholars, highlights the necessity of horizontal coordination between institutions and vertical coordination across various levels of government to address complex issues that extend beyond a single jurisdiction. In "New Borders for a Changing Europe," O'Dowd (2004) argues that Europe's borders represent not merely territorial dividing lines but also areas where different levels of governance interact and negotiate. In this border context, coordination is required among military, police, immigration, customs, intelligence, and health authorities, with local governments and non-state actors often involved.

The concept of Integrated Border Management (IBM) has become the dominant model in international policy discussions about border management. This model emphasizes three interrelated levels of coordination: intra-service cooperation, which refers to internal coordination within a single institution to ensure policy consistency from the central level to field operations; inter-agency cooperation, which involves collaboration between different agencies responsible for various aspects of border management; and international cooperation, which includes bilateral or multilateral agreements between neighbouring countries for joint border management (IOM, 2024).

Recent studies on IBM implementation highlight significant challenges in achieving effective coordination. Wong Villanueva et al. (2022) emphasize that successful governance in cross-border contexts depends on factors like interpersonal trust, institutional incentives, and technical capacity, rather than just formal coordination mechanisms. They suggest evaluating cross-border governance based on outcomes such as integration and cooperation. The European Union's experience with European Integrated Border Management (EIBM) underscores the need for integrated information systems and precise coordination between Frontex and national authorities. However, challenges remain, including national sovereignty, varying technical capabilities among member states, and conflicts between security measures and human rights.

Coordination challenges are particularly significant in developing countries and post-conflict regions. The Integrated Border Stability Mechanism (IBSM), launched in West Africa in 2023, highlights the necessity for partnerships among governments, civil society, and international donors to tackle transnational threats (UNODC, 2023). There is a distinction between formal coordination, involving established structures and protocols, and informal coordination, which relies on personal relationships and situational problem-solving. Research shows that in developing countries, informal coordination can often be more effective for day-to-day issues than rigid formal mechanisms (Raharjo & Pristiyanto, 2021).

However, dependency on informal coordination can lead to vulnerabilities, as it may become unsustainable during personnel turnover and lacks clear accountability. An often-overlooked aspect in the literature is how post-conflict contexts influence coordination dynamics at newly formed borders. For instance, at the Indonesia-Timor Leste border, coordination faces not only technical challenges but also psychological and political hurdles. Security personnel from both countries may have a history of conflict, creating barriers to

trust. Additionally, the institutional system may still be fragile or in development, while local populations may hold complex loyalties and ambivalent views towards state authority (Palmer & Carvalho, 2021).

Colonial Heritage and Border Typology: Between the Lines on the Map and the Field Reality

The complexity of securing the Indonesia-Timor Leste border cannot be separated from the colonial historical heritage that forms the unique characteristics of the border. Using the Hartshorne (1936) border typology framework, the RI- DRTL border can be understood as a complex combination of three types of overlapping boundaries, namely: *antecedent boundary*, *subsequent boundary*, and *superimposed boundary*. These three characteristics create a fundamental paradox in border security, where the efforts to enforce state sovereignty clash with geographical, social, and historical realities that are not fully accommodated by political lines on the map.

Antecedent Boundary: The Boundary Line as a Colonial Heritage

The Indonesia-Timor Leste border is basically an *antecedent boundary* that was drawn long before the region developed intensively in the sense of the modern nation-state. This boundary line was established through the Treaty of Lisbon of 1859 between the Dutch East Indies and the Portuguese. This was made clear in the 1913 Hague Convention, which divided the island of Timor based on European colonial interests without in-depth consultation with local communities (Simarmata et al., 2019).

In strengthening the statement on the concept, one of the government officials (INF-10). Motaain explained that the colonial boundary line (border) was drawn on the map based on the division of power between the Netherlands and Portugal, with little consideration for the socio-cultural realities of the people who had lived in the region for centuries. These *antecedent characteristics* create a fundamental problem, namely: the boundaries that exist today do not reflect the patterns of settlement, land use, or social ties of border communities.

Furthermore, the process of determining colonial boundaries that is not precise leaves a number of segments that have not been clearly delineated until now. In line with this explanation, the Lantamal Operations Assistant (INF-06) explained that there are still gray zones along the border, especially in the Oekusi sector, where the boundary line on the map is not fully clear in its implementation on the ground. This ambiguity becomes a potential source of conflict and complicates security operations as field officers often do not have a definite reference to the boundaries of their jurisdiction.

Subsequent Boundary: Society's Adaptation to the Boundary Line

The Indonesia-Timor Leste border, although the boundary line is *antecedent*, over time, the border community has developed an adaptation to the existence of the line by giving the characteristics of the *subsequent boundary* to this border. A senior security official (INF-03) explained that border communities have created a pattern of life that adapts to the existence of the border, but this adaptation is not always in line with the rigid concept of state sovereignty". This practice includes the development of traditional pathways for access to farmland, water sources, and places of worship located on the other side of the border.

This *subsequent boundary phenomenon* creates a dilemma for the security forces. On the one hand, the state demanded the enforcement of strict boundary lines in accordance with the principle of Westphalian sovereignty. On the other hand, overly rigid enforcement ignores the reality that border communities have developed livelihood systems that depend on cross-border mobility. An informant from the intelligence sector described this situation by saying, "Families are separated by the boundary line, customary land is divided, traditional routes for trade and water access are cut off by lines on the map. Technically, they are breaking the law when crossing without documents, but from their perspective, they are simply continuing a practice that their ancestors have been doing for generations" (INF-05).

Superimposed Boundary: The Case of Oekusi as a Geographical Anomaly

The typological complexity of the RI- DRTL border is most evident in the case of Oekusi, an enclave of Timor-Leste that is separated from the main territory of the country and surrounded by Indonesian territory. Oekusi serves as a classic example of a superimposed boundary—a boundary established without regard for the geographical and ecological unity of the area. An in-depth explanation of the complexities surrounding Oekusi was provided by the Lantamal Intelligence Assistant. The situation in Oekusi is highly complicated, particularly concerning a disputed area around Naktuka, where the interpretation of the river's boundary line remains contested. According to Indonesia, major rivers serve as boundaries, indicating that the area north of the river belongs to Indonesia. However, Timor-Leste asserts that the entire watershed is part of its territory because it is a vital water source for Oekusi. This area is particularly fertile due to its proximity to the river, making it contentious for both parties (INF-07, interview July 22, 2025).

The Naktuka case exemplifies how superimposed boundaries can give rise to conflicts stemming from the mismatch between political borders and ecological and economic realities. Additionally, this situation is complicated by the presence of residents holding dual ID cards from both Indonesia and Timor-Leste, reflecting the ambiguity of the region's status. According to the Lantamal Operations Assistant, residents in Naktuka utilize Indonesian KTP (Identification Cards) for improved access to health and education services and Timor-Leste KTP for other purposes.

Politically, the majority of Naktuka's population favors joining Indonesia; however, the Timor-Leste government opposes this because it would result in the loss of valuable fertile land (INF-06, interview July 22, 2025). An informant from Lantamal noted that President Xanana Gusmão once proposed a boundary agreement to Jakarta, suggesting the use of a large river as a boundary—an option that would effectively benefit Indonesia. This proposal, however, was emphatically rejected by the opposition party, Fretilin, which accused Xanana of "wanting to sell the country to Indonesia" (INF-06, interview July 22, 2025). The internal political dynamics of Timor-Leste demonstrate that resolving border disputes involves not only technical and geographical considerations but is also closely tied to identity politics and post-independence nationalism.

Kinship as a Double-Edged Sword: Between Social Capital and Security Vulnerabilities

The results of the study show that if the colonial legacy shapes the structural complexity of the RI-DRTL border, then the cross-border kinship ties create an operational paradox that is no less challenging for border security. Communities on both sides of the border have very strong socio-cultural ties, encompassing a common language, traditional kinship systems, as well as the practice of cross-border marriage that has been going on for centuries. These ties, within the framework of social capital theory, should be an asset for building cooperation and peace in post-conflict areas (Putnam, 2000). However, the findings of this study suggest that kinship bonds are actually a *double-edged sword*: on the one hand, they facilitate social reconciliation, but on the other hand, they create a security vulnerability that is exploited for transnational crime. Furthermore, inflexible border security policies ignore these socio-cultural realities, creating tensions between border communities and the state apparatus.

The Dimension of Cross-Border Kinship: Socio-Cultural Unity Cut by Political Lines

The most basic characteristic of the RI-DRTL border is that the country's political line separates societies that are socio-culturally a single entity. The Head of the Belu Resort Police Intelligence Unit explained this phenomenon by saying that people on the border have very strong kinship ties. In fact, many are from one tribe. Their tribal home is in Timor-Leste, but they live in Indonesia. Some of them live in Atambua; their father is next *door*, sometimes the wife is here while the husband is there (INF-04).

This phenomenon is not just a distant kinship, but concerns a nuclear family separated by state borders. Informants from the intelligence sector provide historical context that explains why these bonds are so strong. From the beginning, Indonesia and Timor-Leste were one community. When the boundary line was drawn by the colonials, no one asked the people if they wanted to be separated. As a result, until now, there are still many who have families on both sides of the border, some even marry across borders (INF-05). Cross-border marriage is a practice that has been going on for generations and is seen as commonplace by border communities, although from a legal perspective, the state creates complexity in citizenship status and mobility.

Stopped Cross-Border Passes: Policies That Ignore Social Reality

The paradox of kinship ties becomes even more pronounced when state policies fail to meet the socio-cultural mobility needs of border communities. A critical issue is the termination of the Cross-Border Pass (PLB), which previously facilitated mobility for socio-cultural purposes in these areas. A security official explained the functions of the PLB, describing it as a type of passport specific to border regions, distinguished by its red cover. However, the PLB is no longer in use. This passport was beneficial for individuals with family across the border, allowing them to visit without the burden of expensive passports (INF-04).

The termination of the PLB has created a dilemma for border communities with legitimate reasons to cross, such as attending family funerals, traditional ceremonies, or weddings. Senior security officials described the situation: "When there is a wedding or a family member dies on the other side, they must cross. However, using the official route at Motaain incurs high costs and a long detour. As a result, they opt for the trail— the rat trail. Technically, they're breaking the law, but from their perspective, it's an urgent family need" (INF-03).

The problem is further aggravated by the high cost of obtaining passports relative to the incomes of border community members. While the official price of a passport is IDR 600,000, the actual cost can reach IDR 1,000,000 due to additional fees and difficulties in accessing immigration offices. An informant from the intelligence sector emphasized, "For the border community, which primarily consists of farmers with limited incomes, a passport costing one million rupiah is prohibitive. If multiple family members are involved, the costs can easily exceed several million rupiah. This is simply unrealistic" (INF-05).

9 Kilogram Dispensation: Pragmatism in Accommodating Customs

Interestingly, while formal policies tend to be rigid, there is a level of pragmatism at the field implementation level that accommodates the socio-cultural needs of the community. A prime example of this is the "9-kilogram dispensation" for traditional events. One security official explained this practice: there is an unwritten policy that allows individuals attending traditional ceremonies on the other side to bring goods weighing up to 9 kilograms without being considered smugglers. This practice honors the tradition of bringing offerings or donations to such events. This dispensation reflects an implicit recognition that overly strict enforcement of the law can lead to conflicts with local communities and disregard longstanding cultural practices. However, it also introduces legal ambiguity and loopholes that can be exploited. As the same informant acknowledged, "The problem is, how do we differentiate between people who actually bring goods for traditional events and those who claim to be attending traditional events but are actually smugglers? This creates a grey area that is difficult to control" (INF-04).

Daily Deportations: The Tension between State Sovereignty and Social Needs

The consequence of the termination of PLB and the high cost of passports is an increase in the number of illegal border crossers who then have to be deported. Informants from the intelligence sector explained that deportations occur almost every day. Indonesians caught in East Timor without documents will be deported to Indonesia, and vice versa. The coordination of this deportation involves all parties of PLBN, Immigration, Police, and TNI because there must be a formal handover (INF-05). Ironically, most of the people deported

are not criminals or security threats, but ordinary citizens who cross for family purposes or to seek a livelihood. Senior security officials provided a nuanced perspective on the situation. "When arresting people who cross illegally, we have to ask: is this a criminal or is this a desperate person for economic or social needs? Most of the cases we handle are secondary. They are not criminals, they are just desperate people" (INF-03).

The Dark Side of Social Capital: The Exploitation of Kinship Ties for Transnational Crime
In previous sections, we explored how kinship ties can conflict with formal security policies. Research supports Portes' (1998) argument about the dark side of social capital, where strong social networks are exploited for illegal activities. Informants from the intelligence sector revealed that smuggling syndicates use these familial bonds to transport illegal goods like fuel and used clothing, thriving on community trust that helps them avoid detection (INF-05).

A senior security official cited local fishermen with families in Timor-Leste who smuggle goods using their boats, justifying their actions as "helping the family" and not viewing it as a crime, despite the negative impact on the state (INF-01). One resident, originally from Timor-Leste but living in Indonesia, shared his experience of cross-border oil smuggling facilitated by family networks: "I dare to smuggle because there are families on both sides. We communicate with buyers in Timor-Leste by phone; they transfer dollars, and we deliver the goods" (INF-11). For many, this is a necessary economic survival strategy, with revenues from smuggling reaching three to five million rupiah per shipment, compared to only two hundred thousand rupiah as fishermen.

When security measures are tightened, informants do not cease smuggling out of moral concerns but due to increased operational risks. The informant emphasized smuggling as a job that requires management, not a social norm violation. Informants described an organized system for smuggling, including using specific boats, conducting operations at night, and coordinating with recipients across the border. This highlights a relatively organized informal economy based on social trust.

Local communities often do not perceive small-scale smuggling as a crime, viewing practices like transporting kerosene or rice as part of survival economics. However, these actions collectively undermine the national economy and contribute to a shadow economy (INF-05). There's a disconnection between the state's view of legality and the border community's interpretation of informal practices. Addressing this gap requires not just stricter law enforcement but also viable economic alternatives.

Institutional Coordination: Informal Pragmatism in an Unintegrated System
Colonial legacies create structural complexities, while kinship bonds lead to operational paradoxes, revealing a significant gap between the ideals and the reality of border security coordination. Ensuring the security of the Indonesia-Timor Leste border involves key institutions like the Indonesian National Army, the National Police, the State Intelligence Agency (BIN), Immigration, Customs, and the National Border Management Agency (BNPP), which operates through the Cross-Border Post (PLBN). Effective border management, as outlined in multi-level governance theory, relies on both horizontal and vertical coordination (O'Dowd, 2004). However, this study finds that real-world practices depend more on informal relationships than on established frameworks or integrated information systems.

Formal Coordination: ICTS and PLBN Meetings as Administrative Forums
At the formal level, inter-agency coordination at the RI-DRTL border operates through two main mechanisms. First is the Integrated Cross-border Terminal Services (ICTS), a coordination system at the border post (PLBN) that brings together all relevant agencies under one roof. A senior security official explained the composition of ICTS: "At PLBN, several agencies are part of ICTS, including representatives from the Police,

TNI, Customs, Immigration, the Quarantine Agency, the Transportation Service, BAIS, and Intelligence. Each agency has its specific responsibilities" (INF-03).

The second mechanism involves coordination meetings initiated by government officials to address operational issues. An informant from the intelligence sector described this process: "Formal coordination typically occurs when government officials invite personnel from the post to a meeting to discuss various problems. The frequency of these meetings varies depending on the situation; there is no fixed schedule, making it more situational" (INF-05). This indicates that formal coordination is reactive—it is triggered by specific issues rather than being proactive and systematic.

Additionally, while ICTS has all agencies located in one area, this physical co-location does not automatically lead to operational integration. Informants from various institutions acknowledged that each agency operates in "silos," maintaining its own information systems, procedures, and priorities. Currently, there is no unified information system that enables real-time data sharing between agencies regarding the movement of people, goods, or security threats.

Informal Coordination: Pragmatism in the Absence of an Integrated System
In contrast to formal coordination that is ad hoc and limited, informal coordination actually runs more intensely and is considered more effective by field actors. Informants from the intelligence sector provide a comprehensive explanation of this pattern. Informal coordination is actually more intense. Friends in Binda who are in the border area communicate every day to find out if there are border crossers who carry out illegal activities or if there are violations committed by Indonesian or Timorese citizens. This informal communication is carried out with government officials and their staff, Immigration, Customs, and also Pamtas" (INF-05).

The main medium of informal coordination is through WhatsApp groups. This is an interesting thing. When asked if there is a WhatsApp group for coordination, the informant from the intelligence sector replied firmly that there is a WhatsApp group and they have a group for coordination (INF-05). The use of WhatsApp as the main coordination tool reflects pragmatism in the absence of an adequate official communication system. On the one hand, WhatsApp allows for quick and easy communication without complicated bureaucratic procedures. On the other hand, this reliance on informal communication platforms creates vulnerabilities: there is no official documentation, there is no systematic archiving mechanism, and important information can be lost when personnel change.

Senior security officials provided further context on why informal coordination has become dominant. This is because if there is a case of deportation, for example, it must immediately coordinate with all parties. The Immigration Department for documents, the TNI for escort if needed, and the BIN for intelligence information. If you wait for the administration of official correspondence, it takes days. For efficiency and time effectiveness, direct coordination by phone or WhatsApp is quick and effective. For document matters, it will follow (INF-03). This statement suggests that informal coordination emerged as a response to the inefficiencies of formal procedures, rather than as a complement to an already well-functioning formal system.

Border Police Agreement with Timor-Leste: Limited Bilateral Cooperation
At the international level, Indonesia and Timor-Leste have a Border Police Agreement signed in 2006-2007. One of the security officials explained that the function of this agreement is to establish an agreement between the Timor-Leste Border Police and Indonesian security officers. The agreement regulates coordination in handling cross-border cases, including how to handle stolen vehicles brought across or other issues. This agreement is still in force today (INF-04). However, the implementation of the Border Police Agreement also faces limitations. Bilateral coordination is more *case-by-case* than systematic. The informant explained that

communication with *counterparts* in Timor-Leste is also more often done through personal channels, direct phone calls, or WhatsApp with familiar officers, rather than through formal, procedural diplomatic channels. This reflects the same pattern as domestic coordination, which is the reliance on personal relationships because formal mechanisms are considered too slow and bureaucratic.

Coordination Gap: Absence of an Integrated Information System
The main issue affecting coordination among agencies is the lack of an integrated border information system. Currently, there is no digital platform for real-time sharing of information regarding people, goods, or security threats. Senior security officials recognize that Immigration, National Police, and TNI do not share essential data, and Customs operates separately, requiring officials to request information from each agency individually when tracking suspects (INF-03). This disconnection leads to several problems: responses to threats are delayed due to manual coordination, agencies lack comprehensive situational awareness, data is scattered and non-standardized, and personnel turnover results in lost institutional knowledge. A senior security official pointed out, "We in the TNI focus on territorial security, while the National Police handle law enforcement, BIN deals with intelligence, Immigration oversees documents, and Customs focuses on goods. Each agency has its own priorities, sometimes misaligned, with no systematic mechanism to coordinate them" (INF-01). This highlights the critical need for strategic coordination to integrate various mandates into a cohesive border security strategy.

DISCUSSION
The complexity of securing the Indonesia-Timor Leste border, as revealed in this study, prompts critical reflection on the theoretical assumptions prevalent in contemporary border studies literature. Furthermore, the empirical findings challenge us to reconsider how the state should balance the demands of territorial sovereignty with the socio-cultural realities of border communities. This dilemma cannot be addressed through a purely technical or administrative approach (Sadozaï, 2024; Günay & Witjes, 2016). The study confirms that three border typologies operate simultaneously in this region, aligning with Newman's (2006) suggestion that borders are not static lines but zones of ongoing negotiation.

However, the case of Indonesia-Timor Leste reveals a more fundamental issue. In the post-conflict context, the colonial legacy does not simply create a "technical problem" of demarcation. Instead, it gives rise to a structural paradox that questions the legitimacy of the border's construction itself. The 1859 Lisbon Line and the 1913 Hague Convention were established without consultation with local communities (antecedent boundaries) and have now become a social reality that must be managed (subsequent boundaries), while still leaving geographical anomalies, such as the Oekusi enclave, that require a high level of political resolution (superimposed boundaries).

The interaction of these three typologies creates a layered complexity that Hartshorne (1951) did not anticipate, highlighting the need for a new theoretical framework that is more attuned to post-conflict border dynamics in Southeast Asia. Comparative studies of colonial divisions in Africa reveal a similar pattern, where ethnic geography and colonial decisions continue to influence contemporary border conflicts long after independence (Müller-Crepon et al., 2025; Paine et al., 2024). An intriguing and conceptually challenging aspect of this study is the ambiguity of social capital at the border.

While Putnam (2000) and Coleman (1988) argue that social networks are assets for societal cohesion, our findings suggest that, in terms of state security, the same social capital can become a liability. The negative aspect of social capital identified by Portes (1998) is not solely the result of exploitation by criminal actors but also a consequence of security policies that disregard social legitimacy. Interview data with INF-11 reveal a significant epistemological gap: what the state labels as "smuggling" is seen by the community as a legitimate "survival strategy."

This phenomenon is also noted in studies of African and South Asian borders, where the informal economy serves as a rational response to state policies that fail to accommodate local realities (Thompson, 2024; Raharjo et al., 2024). With a smuggling income ranging from 3 to 5 million rupiahs per day, compared to legal fishermen earning 200 thousand rupiahs, the community's rational choice leads to an informal economy that is criminalized by the state. This paradox reflects a broader dilemma in the study of transnational crime in Southeast Asia, where multibillion-dollar criminal networks thrive not merely due to weak law enforcement but because the state fails to provide viable economic alternatives (United States Institute of Peace, 2024).

The theoretical question that arises is: at what point should the state recognize that its own security policies contribute to the criminal activity it seeks to prevent? The termination of Cross-Border Passes without offering affordable alternatives perpetuates a cycle where policies intended to enhance security instead drive the mass criminalization of long-established socio-cultural practices. These findings contribute to the discussion regarding borderland governance (Palmer & Carvalho, 2021; Bigo, 2002), demonstrating that the legitimacy of the state in border areas cannot be taken for granted but must be continuously negotiated with local communities. Studies of securitized borderlands indicate that state efforts to assert sovereignty through strict control often create transnational spaces that challenge state authority (Rosière & Jones, 2012; Côté-Boucher et al., 2014).

The findings regarding institutional coordination, which remain informal and reactive, highlight the gap between the rhetoric of Integrated Border Management and the reality of its implementation on the ground. While the multi-level governance literature emphasizes the necessity of systemic coordination (Wong Villanueva et al., 2022; O'Dowd, 2004), practices observed at the Indonesia-Timor Leste border suggest that effective coordination relies more on personal relationships among personnel than on formal institutional systems. This pattern is also noted in Lebanese border studies, where security coordination depends heavily on informal cross-sectarian networks (Gaub, 2017).

Interestingly, WhatsApp groups have proven to be more effective than formal PLBN meetings—this paradoxical yet enlightening finding demonstrates that such pragmatism allows for essential flexibility during emergencies. However, reliance on informal coordination creates systemic vulnerabilities; when personnel change, coordination can be disrupted until new relationships are formed. More critically, there is no systematic documentation or clear accountability in informal coordination, leading to what Guiraudon and Lahav (2000) describe as "venue shopping," wherein agencies sidestep formal mechanisms in favor of operational flexibility.

The European Union's experience with European Integrated Border Management indicates that effective coordination necessitates significant investment in technological infrastructure and standardized procedures (European Commission, 2023; Kasparek, 2016). However, lessons learned from Indonesia and Malaysia in the Entikong-Tebedu area reveal that technology alone is insufficient. While PLBN Entikong benefits from a relatively integrated Cross-Border Control (CIQ) system, coordination among domestic agencies still encounters challenges, particularly with TNI's tendency to dominate and create tensions with civilian agencies (Firdaus & Umar, 2022; Syafe'i et al., 2020). This reflects common issues in civil-military relations on post-conflict borders (Caparini, 2006).

What sets Entikong-Tebedu apart from the Indonesia-Timor Leste border is the presence of a formal bilateral coordination platform—the Socio-Economy of Malaysia-Indonesia Committee (Sosek Malindo), established in 1985. This platform provides an institutional mechanism for proactively resolving issues rather than simply reacting to them (Lee & Tham, 2022). Additionally, the Border Trade Agreement, which allows trade of up to RM 600 per month without tariffs, illustrates the importance of a "soft border" approach. This approach

acknowledges that borders are not solely about security control but also serve as economic and social spaces (Martinez, 1994; Kolossov & Scott, 2013).

A similar pattern is evident in the context of the Indonesia-Malaysia maritime border on Sebatik Island. Studies show that successful security coordination depends on three critical factors, which are equally relevant to land borders: infrastructure readiness, operational integration, and human resource development (Nurisnaeny et al., 2024). More importantly, Sebatik's experience emphasizes the significance of integrating technological capabilities with local knowledge networks. This lesson is particularly applicable to the Indonesia-Timor Leste border, which relies on community intelligence for daily security operations.

These comparative findings indicate that, despite geographical differences (maritime vs. land) and different country pairs (Malaysia vs. Timor Leste), the fundamental challenges of securing Indonesia's borders are consistent: integrating formal systems with informal practices, combining technology with local knowledge, and balancing state sovereignty with the social legitimacy of border communities. These dilemmas are not unique and are faced by other borders in the Global South (van Schendel, 2005; Megoran, 2017).

However, both Entikong-Tebedu and Sebatik continue to struggle with the persistent issue of unofficial routes (rat routes), highlighting that merely having physical infrastructure and digital systems does not solve the root problem if the economic empowerment of border communities is neglected. This lesson is echoed in the Sulu-Sulawesi border study, which found that cross-border cooperation fails to tackle transnational crimes without inclusive economic development (Raharjo et al., 2024). These comparative lessons carry significant policy implications for the Indonesia-Timor Leste border.

First, it is crucial to reactivate the Cross-Border Pass (PLB) with an improved design. PLB 2.0 should use biometric technology for identity verification, have a fee cap of IDR 100,000 (compared to IDR 1 million for a passport), and allow 12 socio-cultural trips per year, with additional traditional event allowances. This aligns with the smart border concept, integrating technology with socio-cultural considerations (Ackleson, 2005; Dijstelbloem & Meijer, 2011). Implementing a fast-track clearance mechanism for PLB holders with a clean record could reduce crossing times to 5-10 minutes, decreasing the incentive to use illegal routes while upholding state sovereignty. Border policies should adapt to community needs rather than focus solely on state security (Brambilla, 2015; Johnson & Jones, 2019).

Second, developing an Integrated Border Management System connecting TNI, Polri, BIN, Immigration, Customs, and BNPP will address coordination fragmentation. This system should feature a unified database, machine learning-based early warnings, standardized procedures, and encrypted mobile apps, replacing informal communication. Although the initial investment of IDR 50-75 billion is considerable, effective management can yield significant returns (European Commission, 2023; Longo, 2018).

Finally, community-based border management is vital for security. Establishing Border Community Forums in sub-districts, providing training, and creating economic empowerment initiatives can reduce reliance on the illegal economy and build trust. This model echoes successful approaches in West Africa and effective community policing strategies in the Global South (UNODC, 2023; Goldsmith, 2005; Dupont et al., 2003).

These three recommendations complement one another and must be executed simultaneously: PLB 2.0 without a Border Management System (BMS) will create coordination gaps; BMS without community empowerment will encounter local resistance; and community empowerment without an effective control system will introduce new security vulnerabilities. This reflects a holistic security principle emphasized in the literature on human security at the border (Bilgic & Pace, 2017; Vaughan-Williams, 2015).

This research undoubtedly has limitations that need to be acknowledged to contextualize the findings. The geographical focus on Belu Regency limits the generalizability of the results to other border areas, such as Malacca and North Central Timor, which may exhibit different dynamics. The qualitative approach, involving 11 informants, provides depth but restricts the ability to make broader generalizations. These limitations are common in complex border studies but can be addressed through mixed-methods research in the future (Johnson et al., 2007; Tashakkori & Teddlie, 2010).

Additionally, the dimension of security technology has not been explored in depth, despite its importance in the era of digital security. The perspective of Timor-Leste and the dynamics of bilateral coordination have also not been comprehensively studied, reflecting access challenges in post-conflict border research. Follow-up research should adopt a mixed-methods design with a broader geographical focus, explore the feasibility of integrating technologies like drone surveillance and AI-based facial recognition, and engage informants from Timor-Leste to gain a holistic understanding of bilateral challenges. Only through this comprehensive research agenda can the understanding of post-conflict border security be deepened, providing a stronger empirical foundation for policy formulation that is responsive to socio-cultural complexities while maintaining state sovereignty.

CONCLUSION

The security of the Indonesia-Timor Leste border presents a paradox that raises three key questions. First, the overlap of colonial antecedents and boundary typologies creates structural complexities, as seen in the Oekusi enclave and the Naktuka dispute. Second, cross-border kinship ties can both aid reconciliation and expose communities to risks from transnational crime when security policies fail to acknowledge local social legitimacy. Third, coordination at the border is mainly reactive and informal, relying on personal relationships, which creates vulnerabilities for criminals.

This research highlights that the negative aspects of social capital in post-conflict borders are structural results of the disconnect between state sovereignty and social legitimacy. This extends Portes' (1998) theory by showing that state policies can turn social capital into a security liability. The study recommends three interventions: reactivating a biometrics-based PLB 2.0 system for accessibility; developing an integrated Border Management System for real-time information sharing among six agencies; and institutionalizing community-based border management. Successful examples from the Indonesia-Malaysia border demonstrate that effective coordination and a soft border approach are crucial, rather than relying solely on technology.

A key principle is that the legitimacy of border policy depends on balancing territorial sovereignty with community needs; states cannot secure borders if communities feel alienated. Post-conflict borders like that of Indonesia and Timor Leste will remain contentious, where state sovereignty conflicts with social realities. The challenge is securing the border without alienating interconnected communities. Future research should use a mixed-methods approach, explore modern security technologies, and include perspectives from Timor-Leste. Today's policy decisions will shape the Indonesia-Timor Leste border's future, determining whether it facilitates peace and legitimate interactions or perpetuates conflict and criminalization.

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Can the State Listen? Reading Spivak in Indonesia's Dark Protest 2025

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Abstract

Gayatri Chakravorty Spivak's classic question, "Can the subaltern speak?" challenges not only the silence produced by colonialism and patriarchy, but also the way modern academic discourse establishes representations of "the other" as a technique of knowledge governance. This article revisits Spivak's argument and the subsequent reflections compiled by Rosalind C. Morris, then integrates them with the contemporary Indonesian context, particularly in the "Indonesia Gelap 2025" demonstration. Using a Cultural Studies approach and a hermeneutic-deconstructive framework, this paper examines how subaltern voices, which often appear as traces, cracks, or performances, attempt to negotiate audibility amid established representational apparatus. The main arguments of this article are: (1) subalternity is not an essential category, but rather a position in power relations that closes access to audibility; (2) "speaking" is not merely a vocal action, but rather an event of recognition in a discursive field that is often curated by the dominant party; (3) in the context of "Indonesia Gelap 2025," various symbolic, performative, and curatorial strategies (ranging from slogans, mass choreography, to happening art) reveal the politics of hearing: who has the right to hear, interpret, and decide. In turn, this article proposes an ethics of listening that transforms the scheme of "giving voice" into a practice of reading-listening that is sensitive to the unspeakable, thus opening up the possibility for subaltern agents to "speak back" without being immediately co-opted by the dominant voice.

Keywords: subaltern, representation, epistemic violence, cultural studies, ethics of listening.

INTRODUCTION

Gayatri Chakravorty Spivak's seminal question, "Can the Subaltern Speak?", has become a fundamental challenge to modern epistemology and a reflection of postcolonial societies (Spivak, 2010). This seemingly simple query critiques the Western knowledge system, which for centuries has defined who has the right to speak and who must remain silent. Spivak reveals that colonialism not only plundered land and labor but also suppressed local ways of knowing, replacing them with a Western logic that claims objectivity (Spivak, 2010, pp. 23-25). She calls this "epistemic violence," a form of violence that operates not with weapons, but with language, archives, and discourse (Spivak, 2010, pp. 26-28). In this framework, the subaltern are not only "the oppressed," but also "the unheard," because their voices are ignored by the colonial and patriarchal hearing system that still persists today.

Spivak's ideas resonate deeply in Southeast Asia, especially Indonesia, where epistemic colonialism continues to cast a long shadow (Mignolo, 2011, pp. 18–21). Since independence, the narrative of national development has often positioned the people, especially marginalized groups such as farmers, laborers, women, and students, as recipients of policy rather than subjects in policymaking. In this system, the state acts as a ventriloquist speaking on behalf of the people, reducing them to objects in the narrative of progress (Said, 1979, pp. 325–328). The media and academic institutions reinforce this pattern: the people are always "represented," but rarely allowed to represent themselves. Thus, Spivak's relevance lies not in her focus on India, but in her warning about the dangers of a discourse of liberation that unconsciously repeats colonial mechanisms through claims of representation (Morris, 2010, pp. 8-10).

This crisis of representation is clearly evident in the "Indonesia Gelap 2025" (Dark Indonesia 2025) protests. These actions are not merely spontaneous responses to government policies but symbols of resistance against communication structures that monopolize public meaning and information. The banners reading "We are dark because you turned off the lights" are performative statements about the loss of moral clarity and political transparency (Liputan6.com, 2025). The darkness referred to is not a literal absence of light but epistemic darkness, a condition in which the people no longer understand decisions affecting their lives because the language of policy has been disconnected from their lived experiences (Reuters, 2025). Here, Spivak's theory echoes: when the system refuses to recognize the language of the people, they create their own language through body language, symbols, candlelight, and collective silence. However, the subaltern's attempts to speak are not always recognized as a "voice." In Michel Foucault's framework, modern power operates by regulating public hearing, determining who is rational, who is emotional, who should be taught, and who has the right to be heard (Foucault, 1980, pp. 133-135). In the case of Indonesia Gelap 2025, major media outlets focused not on the substance of the demands but on the potential disruption to order (NU Online, 2025). It becomes clear that the subaltern are not silent, but rather rendered as noise within a system that only acknowledges certain sounds as "legitimate discourse" (Spivak, 2010, pp. 82-83). Spivak's question "Can the subaltern speak?" must therefore be turned back on us: Can we listen without dominating?

To understand this complexity, this article adopts the framework of Cultural Studies, a discipline that rejects the separation between politics and culture, placing signs, bodies, and affects as dynamic fields of ideological struggle (Storey, 2018; Fiske, 2011, pp. 98-100). From this perspective, the "Indonesia Gelap 2025" demonstration is not only a political event but also a cultural text that produces meaning through the performance and affect it carries. This action serves as a laboratory for what Stuart Hall calls "articulation," the practice of connecting signs in new ways to create meaningful forms of symbolic resistance (Hall, 1996, pp. 132-136). Therefore, reading this event through Spivak's lens is not just about applying global theory in a local context, but also about listening to national history through the marginalized voices of the subaltern.

This approach combines Spivak's theory with the practice of "soft-hand policing" that should be adopted by the Indonesian National Police in this post-truth era. Foucault discusses governmentality as a network of power that not only regulates people's behavior but also controls "the way of hearing" applied by the people themselves (Foucault, 2007, pp. 107-110). In this context, the Indonesian National Police acts not only as law enforcers but also as guardians of social resonance who must be sensitive to the dynamics occurring in society. How the police listen to the voices of the masses, interpret the emerging symbols, and respond to the collective affect determines whether the state acts as a protector of democracy or a silencer of its citizens' voices (Bourdieu, 1977, pp. 72-75).

The epistemic silence that Spivak highlights can be understood as a manifestation of what Foucault calls "the politics of knowledge," where truth is never neutral but is a product of the struggle between discourse and power (Foucault, 1980). In Indonesia, political and moral truths are often constructed through official state narratives that demand uniform interpretations of what is considered to be the "public interest." When people attempt to voice experiences that contradict these official narratives, their voices are often seen as threats to stability. This phenomenon shows that what is silenced is not just speech but also all affective experiences that do not align with the dominant power structure. The term "dark" in the 2025 Indonesia Gelap demonstration is not just a metaphor but a social diagnosis of the loss of resonance between the state and its people—a situation in which communication loses its empathetic dimension and turns into a rigid administrative monologue.

Moreover, the action demonstrates that the subaltern do not just wait for the opportunity to speak but actively create that space. By lighting candles in the streets, the demonstrators form a counter-public sphere in Nancy Fraser's sense: an alternative space where citizens can express their right to speak without going through restrictive institutions (Fraser, 1990). They turn the streets into text, bodies into symbols, and silence into a powerful argument. In such a context, language is not merely a medium for self-expression but also becomes a political act that transcends the existing grammar of power. This "dark" action becomes light in Rancière's political aesthetic: when the "unseen" becomes visible, and the "unheard" becomes a voice that disrupts the sensible division of power (Rancière, 2004). This is the moment when the subaltern speak not only through words but also through gestures, symbols, and performativity, demanding the state to listen in a new and more sensitive way.

General approach: *hermeneutic-deconstructive* in *cultural studies*

This study uses a qualitative hermeneutic-deconstructive approach within cultural studies to examine how meaning is produced and received in socio-political contexts. As Storey (2018) notes, cultural studies views culture as a space where ideology, representation, and power intersect. Cultural actions, like demonstrations or silence, are read as social texts with specific meanings. Hermeneutics analyzes symbols and actions within their context to understand existence through language (Ricoeur, 1976). Combined with Derrida's deconstruction, this approach recognizes diverse, incomplete meanings. In this study, Spivak's theory and the "Indonesia Gelap 2025" demonstration are analyzed as cultural texts, supporting critical listening to marginalized voices within dominant discourses.

Analysis design: three layers of reading

This research uses three interconnected layers of analysis:

a.   Theoretical text analysis (discursive level)
     The first layer involves a deep reading of Gayatri Spivak's *Can the Subaltern Speak?* (1988/2010) and Rosalind C. Morris' introduction (2010). The analysis focuses on five key concepts:
     1.   Epistemic violence,
     2.   Representation vs. re-representation,
     3.   Subaltern women and the body as an arena of discourse,
     4.   Critique of Western universalism,
     5.   The potential of the ethics of listening.
     This analysis describes the text and identifies gaps relevant to Indonesia, guiding the interpretation of cultural practices and state/media narratives.
b.   Contextual-performative analysis (empirical-cultural level)
     The second layer involves analyzing the "Indonesia Gelap 2025" action as a performative practice. Media documentation and observations of symbols like "dark" and "turning off the lights" are analyzed using cultural semiotics and Judith Butler's concept of performativity. The action is seen as a "collective listening event," where public discourse is negotiated.
c.   Reflective-ethical analysis (researcher position level)
     The third layer involves reflective analysis, where the researcher is aware of power dynamics and listens critically, not speaking for the subaltern (Spivak, 2010). This approach emphasizes ethical listening, as proposed by Nancy and Cavarero (2007), where researchers are "responsible listeners" rather than academic translators.

Data collection and analysis procedures

The research process followed four flexible stages:

a.   **Inventory of Sources and Texts** – Collecting primary and secondary sources, including Spivak, Morris, Foucault, Butler, and Rancière's theories, along with media documentation related to "Indonesia Gelap 2025."
b.   **Discourse Deconstruction** – Analyzing the relationship between dominant discourse (state, media) and counter-discourse (demonstrators), identifying power dynamics.
c.   **Symbolic and Affective Interpretation** – Interpreting actions as non-verbal political expressions, with symbols as "sentences" in a new social grammar.

d.   **Ethical Reflections and the Position of Researchers** – Examining how interpretations avoid epistemic violence and ensuring the researcher does not "speak for" the subjects.

Operational framework and research ethics

The operational framework is based on the politics of listening and aesthetics of existence (Foucault, 1990). This framework is implemented through three principles:

a.   **Decolonization of Listening**: Shifting the paradigm from talking about to listening together, inviting police, academics, and media to recognize the power in listening (Mignolo, 2011).
b.   **Articulation and Resonance**: Interpreting how actions connect global issues to local discourse using Hall's theory (1996).
c.   **Reflection on the Apparatus of Power**: Viewing the Indonesian National Police as a tool for listening, not silencing, ensuring security measures maintain social resonance (Bourdieu, 1977).

These principles integrate relational ethics and guide the research's engagement with power, ensuring the methods align with an ethical approach to understanding the world.

Transition to empirical analysis

The methods serve as a foundation for analyzing Spivak's theory in the context of *Indonesia Gelap 2025*. The interpretation process uses slow reading and attentive listening, avoiding rushed judgments of public voices. This method bridges theory and data, affirming the ethical direction of the research: to participate in epistemic liberation and transform how we listen and understand marginalized voices.

This approach contributes to social change, ensuring marginalized voices are heard and contributing to the broader political landscape in Indonesia.

Spivak and the problem of representation in the postcolonial world

A close reading of Can the Subaltern Speak? shows that Spivak (2010) frames the postcolonial problem primarily as epistemic inequality—the unequal production, regulation, and distribution of knowledge—rather than only economic or political inequality. The subaltern is defined less by material deprivation than by a structurally marginal position in representation, lacking access to speak in the dominant language of power (Spivak, 2010, pp. 24–25).

Spivak distinguishes Vertretung (political representation) and Darstellung (symbolic/aesthetic representation) (Spivak, 2010, pp. 70–75). In colonial/postcolonial settings these often collapse into a paradox: elites claim to speak for "the people" while simultaneously staging them as cultural objects (Spivak, 2010, pp. 76–79). Without epistemic awareness, emancipation can reproduce a new representational colonization.

Morris (2010) clarifies that Spivak does not deny the subaltern's capacity to speak; she challenges the conditions of audibility—how institutions listen (Morris, 2010, pp. 8–9). The question thus becomes a call for epistemic humility, asking intellectuals and knowledge institutions to suspend quick judgments and recognize speech forms that do not fit modern grammar (Morris, 2010, p. 12). In Indonesia, colonial inheritances in bureaucracy, media, and academia often evaluate popular knowledge through technocratic standards (Said, 1994, pp. 20–22), treating anger, irony, and street expression as "irrational," even though these register affective knowledge and political insight (Mignolo, 2011, pp. 30–31). The implication is that marginal voices still carry epistemic validity for building a more inclusive narrative.

Bhubaneswari and the body as political text

Spivak's account of Bhubaneswari Bhaduri—an activist who died by suicide in 1926—illustrates how the body can "speak" politically yet be misheard (Spivak, 2010, pp. 92–94). Her family read the death as "suicide for love," but Spivak situates it in anti-colonial struggle; Bhubaneswari timed her death during menstruation to prevent moralistic interpretations and mark it as political statement (Spivak, 2010, p. 95). Patriarchal interpretation nevertheless "normalized" the act, converting her body into a moral tale of female weakness (Spivak, 2010, pp. 96–98). For Spivak, this is epistemic violence: a knowledge regime erases women's political agency because it recognizes only the dominant interpretive language (Spivak, 2010, pp. 99–100).

This lens helps read contemporary Indonesia, where demonstrations are often reduced to "riots" or "emotion." Bodies marching, holding posters, or sitting in silence are not mere physical behavior but **semiotic acts** contesting state epistemic order and asserting audibility in the public sphere (Bhabha, 1994, pp. 44–46).

Indonesia Gelap 2025: action and the architecture of public hearing

Field reading of Indonesia Gelap 2025 indicates a shift from conventional protest to a performative event. Reuters (2025) describes thousands of students demanding transparency in education-budget governance, using symbols such as candles, black cloth, and the phrase, "We are dark because you turned off the lights." Semioticly, these signs disrupt modernity's association of "light" with progress and stability: "dark" functions not as ignorance but as a rhetorical reclaiming of truth, producing counter-illumination—a people's light rejecting the blinding brightness of power (Fiske, 2011, pp. 101–104).

The action combined singing, shouting, prayer, and coordinated silence. These gestures operate as "social statements" that do not require formal grammar; Butler's notion of performative assembly helps explain how gathered bodies generate political meaning through presence (Butler, 2025). Politics becomes an "art of listening," where resonance and silence matter as much as words. Yet Indonesia's listening regime often fails to recognize these frequencies: mainstream coverage frequently frames the event as "disturbing public order" rather than cultural articulation (Detik.com, 2025), echoing Spivak's point that subaltern speech is blocked less by lack of words than by regimes of audibility (Spivak, 2010, pp. 82–83).

Affect and solidarity: darkness as a network of political emotion

The action also produced collective affect beyond verbal discourse. Massumi defines affect as intensity preceding meaning (Massumi, 2002); here "darkness" became an affective medium aligning bodies in shared grief, loss, and moral disorientation. Candlelight and acoustic music in Yogyakarta/Bandung, and an interfaith prayer in Jakarta, indicate a shift toward emotion-rooted politics that is not irrational but a social rationality grounded in empathy and embodied experience (Ahmed, 2004). This extends Foucault's parrhesia: courage appears not only in speech but in presence and silence (Foucault, 2001, pp. 19–22). Silence becomes a refusal to circulate words already corrupted by power, enabling reflection and solidarity (Nancy, 2007, pp. 10–12).

Between voice and noise: the role of media in action

A major finding is the media's role as an arena where public meaning is stabilized. Coverage commonly frames Indonesia Gelap 2025 through "orderly/disorderly" rather than "fair/unfair" (NU Online, 2025), aligning with Foucault's account of disciplinary perception that trains publics to see/hear only certain aspects of reality (Foucault, 1977, pp. 200–204). Media normalization reduces political expression to numbers and traffic updates (Foucault, 1977, pp. 205–208), turning existential statements into marginal notes. Power works not only by muting voices but by managing what those voices mean (Spivak, 2010). Some spokesperson quotes are detached from context, emphasizing emotion while removing rational framing (Liputan6.com, 2025), converting aspiration into "noise." This operationalizes Spivak's subtle epistemic violence: sincere voices lose legitimacy when they do not match the syntax of power (Spivak, 2010).

The National Police as a state apparatus: maintaining resonance in handling the "Indonesia Gelap 2025" action

Polri holds a strategic but difficult position: maintaining security while mediating public communication crises. This requires understanding demonstrations as socio-cultural events with symbolic and affective content. In Foucault's terms, policing sits within a dispositif that produces compliance via norms, discourse, and surveillance (Foucault, 2007, pp. 23–25), and thus must guard social sensibility so political difference does not become symbolic violence (Foucault, 1977, pp. 205–208). Large protests place the police between disciplinary power and biopolitical concerns, demanding soft-hand policing oriented to empathy, dialogue, and de-escalation (Butler, 2015, pp. 23–27). Nonverbal signs—candles, songs, silence—should be read as political expression, not threat. Bourdieu's point that action is structured by habitus and symbolic meaning underscores that ignoring meaning is failing to understand society (Bourdieu, 1990, pp. 52–54).

Success is measured not only by absence of violence but by resonance—reciprocity, openness, responsiveness (Rosa, 2019, pp. 289–293). Excessive discipline collapses resonance into control; sensitive listening

strengthens legitimacy and trust. Emerging dialogue-policing practices in Yogyakarta and Jakarta indicate a shift from command to relational communication (Magnis-Suseno, 1984, pp. 134–136). In this sense, Spivak's insight becomes operational: the state learns to listen, and policing becomes a medium preventing subaltern voices from dissolving into administrative noise (Spivak, 1988, pp. 294–298).

The relevance of Spivak to the Indonesian context
Spivak's subalternity functions as a dynamic lens for Indonesia's politics of knowledge. "Subaltern" includes farmers and laborers, but also students, artists, and digital communities outside official channels—epistemic subalterns with knowledge lacking recognized validation (Hall, 1990, pp. 222–225). Indonesia Gelap 2025 is therefore not only protest but a pedagogical event: knowledge emerges from bodies and affect, not only institutional podiums (Bhabha, 1994, pp. 57–59). The ethical choice for the state and Polri—as public hearing apparatuses—is whether to secure order by silencing critique or sustain democracy through listening to plural aspirations (Foucault, 2007, pp. 107–110). Spivak helps clarify that political language may appear as songs, graffiti, or meaningful silence (Spivak, 2010, p. 108); the central Indonesian challenge is less whether people can speak than whether the state can hear diverse forms of speech and grant them rightful recognition in democratic life.

DISCUSSION
From the politics of representation to the politics of listening
Since the colonial era, political discourse has assumed that those in power speak, while the ruled merely echo. Foucault calls this the "regime of truth," where speech reflects power and controls what is said, who can say it, and how it's recognized as truth (Foucault, 1977, pp. 195–208). Spivak's famous question, Can the Subaltern Speak?, asks if those without power can be heard in a system that dictates the language of speech (Spivak, 2010). For Spivak, the subaltern isn't mute from lack of speech, but because the system of hearing is structurally deaf. Their words are trapped in a language that isn't their own, heard only as an echo of power. This is epistemic violence, when knowledge systems refuse to listen to anything outside their own categories (Spivak, 2010, pp. 90–91).

In Indonesia, the "Indonesia Gelap 2025" movement reflects this logic. Protestors chose silence and darkness, not from lack of words, but because the state's political language couldn't accommodate their suffering. Silence becomes a way to speak amidst the noise of state discourse demanding "order and harmony." Darkness, in this context, serves as an epistemic metaphor, a space that the dominant language can no longer illuminate. Like Bhubaneswari in Spivak's story, the masses speak in a way unrecognized by power's grammar (Spivak, 2010, pp. 96–100).

Foucault teaches that power doesn't silence voices but directs their circulation, deciding who is a respectable citizen, who is a provocateur, and who is a statistic (Foucault, 1990, pp. 92–93). Spivak's "politics of representation" doesn't eliminate the subaltern, but renders them absent from the system of signs. Modern states claim openness but only listen to those who speak the language of power. Demonstrations that reject formal formats are labeled "rude" or "ineffective." To shift from the politics of representation to the politics of listening is to focus on "how and who listens" (Couldry, 2010, pp. 1–7). This shift is both epistemological and ethical: it moves from the production of speech to the relationship between speech and reception.

The "Indonesia Gelap 2025" action becomes a transformational moment, critiquing the entire infrastructure of audibility between the people, the media, and the state. Through silence and symbolism, the people force the state to listen without interpretation. This transformation can be seen as a decolonization of the sensorium, shifting the boundaries of what can be seen, heard, and felt (Rancière, 2004, pp. 12–14). The people's silence is a radical act of truth, reconfiguring collective hearing and forcing the world to adjust its frequency (Foucault, 2001, pp. 19–22).

The role of state institutions, especially the National Police, is no longer to suppress noise, but to act as architects of social hearing, ensuring public spaces remain open to diverse resonances (Tyler, 2006, pp. 163–170). The politics of listening requires new sensitivity in law enforcement, not just weighing right and wrong, but listening to why and how things are said or left unsaid. A "soft hand" is no longer just a security strategy, but a deep ethics of listening.

This shift demands an epistemic transformation in academia and media. Researchers and journalists often cover subaltern voices with "neutral" language, but as Spivak warns, "to speak for the subaltern is to silence them" (Spivak, 1999, pp. 308–310). Intellectuals must create an ecology of listening, allowing the subaltern to speak in their own way. The "Indonesia Gelap 2025" action challenges how we understand discourse, representation, and truth. The politics of listening seeks to build a world where truth is woven from the courage to listen to the weakest voices, not monopolized by the loudest. This transformation moves from surveillance to resonance, from controlling sound to listening to echoes (Ahmed, 2004, pp. 10–12). In such a landscape, democracy is not measured by how freely we speak, but by how deeply we listen.

The curatorial nature of power and the theater of representation

Modern power, as Foucault explains, operates not just through physical coercion but through the architecture of discourse, which regulates what can be expressed, who can speak, and how speech is interpreted. The social world functions as a curated gallery, where power determines the layout and what is seen and heard. Colonialism, according to Spivak, was the greatest curatorial project, subjugating territories while also controlling ways of thinking and producing images to reinforce power. In Bourdieu's terms, this is symbolic violence, operating through unconscious norms, and continues through narratives that use representation as a tool of domination.

In Indonesia, the state remains the curator of the "national stage," determining who is considered the ideal citizen. The official narratives of order, development, and nationalism form the backdrop for public expression. Anyone who deviates from this script is seen as a disturbance. The "Indonesia Gelap 2025" demonstrators, by choosing silence and candles, disrupted this staging. Morris notes that in every political representation, those in power cast themselves as directors, while the people are mere extras. However, the public always has the potential to improvise and create their own stage language. In "Indonesia Gelap 2025," this improvisation transformed public spaces into alternative theaters, where bodies became the script and silence the text.

The action rejected formal speeches in favor of symbolism—candlelight, upside-down flags, and silent movements—as a form of epistemic resistance, developing narratives outside the power structure. Spivak would call this counter-narration, where the subaltern rewrites the exposition of truth. Yet, as Morris reminds us, counter-spaces are vulnerable to co-optation. Media coverage can turn resistance into spectacle, turning expression into "content." This is the curatorial paradox: even alternative stages can be absorbed into the dominant system. Foucault's recapture of resistance shows how power uses the language of resistance for its own legitimization. Critical awareness is needed from state apparatus, including the National Police, to avoid becoming the sole directors of the social stage and instead ensure the stage remains open to improvisation.

In this framework, the National Police play a complex role, often acting within a script that demands "order," but true order in a mature democracy allows for improvisation without disrupting harmony. The police can help manage a humanistic social theater where power doesn't control the script but acts as a guardian of space. Rancière's view of politics as a struggle for visibility is relevant here: in "Indonesia Gelap 2025," the unheard demand their right to be heard. The power of the action lies in its refusal to follow the official script. In silence, the people show that meaning can emerge from below, from bodies that see and understand each other outside the state's structure.

If colonial politics of representation was built on who looks and who is looked at, postcolonial politics of listening seeks to reverse this logic: it's not about who watches the people, but how the state learns to listen. This shift moves from a government of vision to one of listening, from power that regulates images to power that nurtures meaning. Soft-hand policing becomes relevant in this context, focusing not just on "restraining violence" but on fostering a new ethic of managing the social stage. A democratic state is not one without curators, but one that invites people to become co-curators. The politics of listening seeks to build a stage that is open and reflective, allowing space for plural resonance, where everyone has the right to determine the lighting and hold the microphone.

The dominant public, subaltern counterpublics, and receptive space

Jürgen Habermas's concept of the public sphere imagines it as an arena for rational discourse, where citizens deliberate freely and equally (Habermas, 1989, pp. 1–5). However, Nancy Fraser critiques this ideal as unrealistic, noting that access to the public sphere is structured by dominant groups who control discourse, leaving marginalized voices unheard (Fraser, 1990). In postcolonial Indonesia, the public sphere often reproduces inequality, with only those who master the language of power having a voice. Civil society groups seeking to speak out are forced to either conform to official discourse or be marginalized. This gives rise to what Fraser calls subaltern counterpublics, alternative spaces where marginalized groups create their own communication and solidarity.

The "Indonesia Gelap 2025" movement embodies such a counterpublic. Instead of making demands, the demonstrators used symbolic language: candles, silence, and bodily presence. In silence, they created a counter-public through shared witness, not debate, rejecting the formal logic of the dominant public that demands articulate, argumentative speech. This action exemplifies Judith Butler's concept of performative assembly, where bodies claim civic space without words (Butler, 2015, pp. 15–22). "Speaking" here means being present with the ethical awareness that the body itself is a political statement.

However, this counterpublic presence is not always peacefully accepted. The state and media often view it through the lens of security and order rather than listening ethics. Foucault's disciplinary gaze objectifies citizens, regulating them as entities to be controlled (Foucault, 1977, pp. 195–208). In this context, the National Police face a dilemma: maintain order while respecting social expressions that reject the official language of order. A "receptive space" should be created, where authorities focus on the moral message rather than the form of the action (Couldry, 2010, pp. 5–7). In this space, the police act as guardians of resonance, not rulers of space, with power and listening becoming inseparable.

This shift to receptive spaces allows for participatory parity, where all voices are heard equally, not merely in formal terms, but through affective equality, where everyone feels listened to meaningfully (Fraser, 1995, pp. 68–93). In Indonesia, this ideal remains unfulfilled due to paternalistic state logic. Counterpublics like "Indonesia Gelap 2025" challenge this by forcing the state to listen, practice epistemic patience, and mature in democracy.

Receptive spaces are a new form of ethical practice in democracy. They respect silence as discourse and balance verbal and non-verbal communication, forming a social choreography that transcends power. For the Indonesian National Police, this means being a guardian of public discourse, ensuring it isn't stifled by administrative noise. In a world filled with noise, listening becomes the most radical act. "Indonesia Gelap 2025" shows that democracy thrives not by hearing fewer voices, but by retaining its capacity to listen. Civil society, the media, and the police must collaborate to build an architecture of listening, where the public sphere becomes not just an arena for words, but a space for the meeting of souls (Ahmed, 2004, pp. 10–12).

Body, silence, and performative tactics

Language has long been the arena for political struggle, but the body is the most ancient and honest theater. Colonial bodies served as mediums of knowledge, discipline, and resistance. Foucault explains that power subtly disciplines the body, regulating movement and public interaction (Foucault, 1977, pp. 135–142). Yet, the body also resists, rejecting the script written for it. Spivak's analysis of Bhubaneswari Bhaduri illustrates the tragedy of the body speaking beyond language, where society fails to understand the political message conveyed by her silent act of protest (Spivak, 2010, pp. 92–95). The subaltern speaks, but no one listens (Spivak, 2010, pp. 98–100).

This tragedy reappears in Indonesia Gelap 2025. Demonstrators, lighting candles and remaining silent, turned their bodies into political statements, rejecting the "orderly" language of power. Silence here is not absence but a rejection of the dominant sound system. Judith Butler's concept of performative assembly explains that bodies gathering in public assert their claim to citizenship without words (Butler, 2015, pp. 9–15). The people assert their right to appear, as Butler states, through their mere presence (Butler, 2015, pp. 21–25).

Rancière argues that politics begins when the excluded demand to be heard (Rancière, 2004, pp. 12–14). The bodies in the streets of "Indonesia Gelap 2025" are those long excluded from discourse. They are not just demanding policy change but recognition within the social structure of hearing. This action shifts the boundaries of what can be heard, seen, and understood as politics, transforming silence into a form of political expression.

In the Indonesian context, silence is often considered the highest form of knowledge in Javanese cosmology, seen as an ethical language that reconnects the self with nature (Hamengkubuwono IX, 1985, pp. 55–58). The "Indonesia Gelap 2025" action can be interpreted not just as protest, but as a spiritual practice to restore the moral balance of the public. In silence, the people pray for a nation lost in moral darkness.

However, silence is often misunderstood by those in power. Modern states view silence as disobedience or a threat. Security forces, particularly the National Police, may see peaceful actions as "security disturbances." To avoid this, the police must learn to see the counterpublic not as a threat but as a corrective mechanism for democracy. In a healthy democracy, the public sphere is plural, and all forms of speech must be heard, whether articulate or symbolic. Soft-hand policing becomes essential, not merely as a security strategy, but as a democratic practice of listening (Tyler, 2006, pp. 163–170).

In "Indonesia Gelap 2025," soft-hand practices create a receptive space where authorities focus on the intent rather than the form of the action (Couldry, 2010, pp. 5–7). This creates an ethical, non-hierarchical relationship between the people and the authorities. The police, as guardians of resonance, affirm that true power lies not in commanding, but in listening without defensiveness. Fraser's concept of participatory parity applies here: true democracy requires listening to all voices, with affective equality (Fraser, 1995, pp. 68–93).

In Indonesia, the public sphere remains paternalistic, with the state as the "parent" who knows best. Counterpublics like "Indonesia Gelap 2025" force the state to listen, helping democracy grow through epistemic patience. Receptive spaces are not only spaces for free speech, but places where silence is respected as discourse. In such spaces, verbal and non-verbal language coexist, forming a social choreography where power is not centered but shared. The police, in this context, must shift from controlling discourse to ensuring it is not stifled. Democracy thrives not by reducing voices, but by expanding the ability to listen. The "Indonesia Gelap 2025" action demonstrates that democracy will not collapse from too many voices, but from losing the ability to listen.

Affect, resonance, and the pedagogy of political emotion

Affect, as Brian Massumi describes, is a prelinguistic vibration that connects bodies with an intensity that precedes rational articulation (Massumi, 2002, pp. 25–27). In political contexts, affect unites the masses without the need for rational consensus. During the Indonesia Gelap 2025 movement, what circulated among protestors was not just an idea of justice, but an emotional resonance of loss, grief, and solidarity. Sara Ahmed asserts that emotions are social practices that shape the relationship between the body and the world, circulating and challenging power (Ahmed, 2004, pp. 8–12). In this action, grief was a shared feeling, creating an emotional pedagogy where people learned to understand the world through collective empathy.

Michel Foucault connects this phenomenon to "biopolitics," where the state regulates not only bodies but emotions and moods (Foucault, 1990, pp. 135–137). The state shapes public emotions through narratives and symbols, controlling when anger must be suppressed and when empathy is allowed. However, Spivak argues that the subaltern are often excluded from these emotional norms (Spivak, 2010, pp. 100–102). The Indonesia Gelap 2025 action was a demand for the right to feel—rejecting imposed happiness and affirming sadness as a form of resistance. This public sadness is not nihilism but emotional parrhesia, a courageous form of feeling in a regime that dismisses emotional honesty (Foucault, 2001, pp. 14–16). In silence, the people demonstrate that affective democracy functions when truth is felt together, not spoken.

Judith Butler expands this idea, suggesting true politics occurs when people are moved by something greater than themselves (Butler, 2009, pp. 39–43). Affective politics challenges liberal individualism, recognizing emotions as communal forces. In the silent crowd, emotions like fear, loss, and anger transform into solidarity, courage, and prayer. These silent bodies create what Butler calls affective commons—communities formed

not by shared ideology but by ethical vibrations. In Javanese tradition, rasa tunggal refers to harmony in difference, a resonance amidst diversity (Magnis-Suseno, 1999, pp. 82–85). In "Indonesia Gelap 2025," diverse groups, including police officers, were united by a shared desire to uphold human dignity. When the police lowered their shields and allowed the candles to remain lit, they participated in this collective affect, rejecting violence.

The Indonesian National Police can view itself not just as an enforcement agency but as a manager of social resonance. In affective politics, control involves guiding emotional energy, not suppression. This requires emotional pedagogy, the ability to interpret public emotional expressions and channel them constructively (Tyler, 2013, pp. 10–12). Affective sensitivity in policing becomes a form of security intelligence— intelligence that feels, not spies. An affectively aware police force understands that every crowd represents a map of resonance, not a threat. They know when to step back, be present, or simply listen. In "Indonesia Gelap 2025," affective sensitivity becomes a new form of intelligence, returning emotion to the heart of politics.

This pedagogy of feeling focuses not on logic, but on the resonance of love. In a world dominated by opinions and algorithms, the path to healing democracy lies in learning to feel again. Affective politics invites society, officials, and the state to build a world not based on fear, but on the shared resonance of love and understanding. It is not about who speaks the loudest, but who listens most sincerely to the vibrations of others.

Media, spectacle, and the production of public opinion

In contemporary society, political reality is shaped not only by power institutions but also by media-driven visual and affective mechanisms. Guy Debord's La Société du Spectacle argues that modern society has shifted from one that "experiences" to one that "watches" (Debord, 1994, pp. 12–14). Political reality becomes spectacle—a series of images competing for dominance in public view. Baudrillard further explains that in the hypermodern world, images don't just represent reality; they create it, making "violence" or "order" the narrative effects of media framing (Baudrillard, 1994, pp. 1–6). Media operates as a visual panopticon, controlling who is watched, feared, and pitied.

In the "Indonesia Gelap 2025" movement, this spectacle battle unfolded. On one side, official media framed the event as a security threat; on the other, citizen-generated content, like videos of silent protest, offered a counter-spectacle. This battle is about who successfully shapes public perception. In Foucault's terms, public perception is an instrument of power, where individuals not only monitor each other but are also monitored (Foucault, 1980). In the digital era, this process is amplified, turning every social action into data and every gesture into content. The sincerity of the resistance in Indonesia Gelap 2025 ironically fuels the spectacle's algorithms.

What's significant, however, is the public's intervention in this logic. By avoiding slogans and loud speeches, the demonstrators refused to be commodified by the media. They offered ambiguity as an ethical strategy: silent, dark, and trembling (Mirzoeff, 2011, pp. 16–19). Silence becomes an anti-image, resisting the aesthetics of power that demands expression. This action critiques the regime of vision, creating a perceptible redistribution of what can be seen and heard (Rancière, 2004, pp. 12–16). By sitting in silence, the demonstrators transform public space into an open arena for interpretation, refusing to be objects of coverage and instead becoming subjects of aesthetics.

This shift presents an ethical challenge for the Indonesian National Police. In an era of instant media, authorities are also performative actors in the digital public sphere (Tyler, 2006, pp. 180–183). Every gesture can be interpreted by the public. Therefore, image governance becomes an ethical practice: how to be present without dominating the frame. The police's role is not to guard the stage but to protect the public visual space, ensuring it remains humane rather than intimidating. This requires high visual sensitivity—understanding not only what is visible but also what is hidden by the language of images (Mulvey, 1975, pp. 6–8).

A sensitive officer knows when to let silence communicate empathy, stepping back when the image itself speaks. A police officer lowering their shield in a crowd of candles might not speak, but in a world saturated with images, that gesture communicates: humanity has not been extinguished.

The digital panopticon and the genealogy of new power

When Jeremy Bentham proposed the panopticon in the 18th century, he could not have anticipated its transformation into a wireless network spanning the planet. Foucault used the panopticon to describe disciplinary society, where individuals internalize surveillance without direct coercion (Foucault, 1977). Yet, as Deleuze argues, discipline has mutated into a society of control (Deleuze, 1992): the digital panopticon functions without walls, operating through algorithms, data, and platform architectures embedded in everyday life. Zuboff terms this surveillance capitalism—an economic model that treats human behavior as raw material for commercial and political gain (Zuboff, 2019). Data is not neutral; it can be used to predict and shape behavior, with surveillance increasingly shared between states and technology corporations.

In Indonesia, this dynamic is intensified by participatory surveillance through social media. Individuals become watchdogs, and demonstrations are recorded, broadcast, and rapidly reinterpreted by competing viewpoints. Indonesia Gelap 2025 reveals a paradox: when people speak through silence, algorithmic systems can accelerate discourses that silence them. Silence is captured, converted into hashtags, and evaluated through commercial metrics—so even silence becomes monitored, curated, and commodified (Couldry & Mejias, 2019). Han calls this a shift from coercive to voluntary surveillance, where people are tempted to display themselves and power becomes "soft," operating through self-exposure (Han, 2015).

These conditions blur the boundary between "security" and "surveillance," with serious implications for civil liberties. In Foucault's biopolitical logic, power regulates life at a granular level—habits, preferences, even the rhythms of feeling (Foucault, 2007). Security institutions must therefore redefine their role: not as guardians of truth, but as guardians of balance between visibility and dignity. For the Indonesian National Police, the challenge is no longer only physical unrest, but also "data riots": distortions, framings, and algorithmic pressures on public perception. A soft-hand approach here means not only limiting physical force, but managing transparency wisely—knowing when to be visible and when restraint reduces escalation (Tyler, 2013).

In Indonesia Gelap 2025, cameras are not merely evidentiary tools but instruments of interpretation: the gaze can deepen wounds or open empathy depending on how it is used. Police thus become actors—and potential curators—within a visual ecology, requiring genealogical awareness of how authority is produced and perceived. Foucault frames ethics not as rejecting power, but transforming it from domination into practices of freedom (Foucault, 1990). Soft-hand policing, then, involves building a trust architecture grounded in empathetic transparency rather than surveillance transparency: data as dialogue, cameras as reminders that the state listens rather than judges (Steyerl, 2016). In line with Spivak's warning, power remains sustainable only if listening does not become another technique of control—because subaltern voices are audible only where listening is made fair.

Power, language, and the politics of knowledge

Language is never merely communication; it is a medium of power. Foucault argues that discourse determines what can be said, who may say it, and under what conditions something counts as true (Foucault, 1972). Language therefore does not only reflect reality—it produces it. When the state labels an event a "disturbance of order," the phrase is not descriptive but performative, shifting an act's moral and legal status. In "Indonesia Gelap 2025," the struggle is not only on the streets but within language itself.

Spivak's question—Can the Subaltern Speak?—targets epistemic audibility rather than vocal ability (Spivak, 2010). The subaltern can speak, yet their voice is routinely translated, filtered, or misread by dominant knowledge structures. Under colonialism, indigenous voices became "exotic evidence" or research objects; today, public voices are often reduced to "aspirations," "complaints," or "ignorance" (Spivak, 2010). Spivak warns that representation without fair listening becomes epistemic violence.

Said extends this critique by showing how the West constructed the East through discourse, portraying it as strange or irrational (Said, 1978). In Indonesia, paternalistic phrases—"for security," "for stability," "for the public interest"—appear neutral while concealing power relations that position citizens as objects of control. Bourdieu adds that language carries symbolic capital: officials are believed not simply because their words are true, but because their positions grant legitimacy (Bourdieu, 1991). Ordinary people are ignored not

necessarily because they are wrong, but because they lack this capital. Indonesia Gelap 2025 disrupts that hierarchy: through silence, people refuse the demand to speak in the authorized syntax. Silence becomes an "anti-discourse," exposing what official grammar cannot contain.

Because power and knowledge presuppose each other (Foucault, 1980), institutions that enforce order also shape social truth. This makes the National Police crucial and ethically tested: how to defend order without suppressing dissent, and enforce law without monopolizing justice's meaning. A way forward is a shift from knowledge enforcement to knowledge empathy—listening to other truths and to how regulations are experienced by citizens (Tyler, 2006). In this sense, legal language should function as a bridge of empathy, and soft-hand policing becomes a practice of protecting language from turning into symbolic violence. Good policing includes the capacity to remain silent with wisdom, not only to speak with authority.

Foucault's parrhesia is the courage to speak truth against power (Foucault, 2001), but in postcolonial settings it also implies the courage of the state to listen. A state that cannot listen has no stable claim to truth; anxiety toward dissent reveals fear of plural meanings, even though democracy depends on that plurality. Indonesia Gelap 2025 offered a lesson in this ethic: meaningful silence taught that knowledge is born not from domination but from encounter. If the National Police can act as guardians of encounter rather than guardians of words, they become not merely disciplinary apparatuses but living institutions that sustain social conversation—because behind every public silence, there is a story waiting to be heard.

The Indonesian National Police and the ethics of the "soft hand": from discipline to sensitivity

Foucault describes modern state apparatuses as disciplinary mechanisms that regulate bodies and spaces to secure order and productivity (Foucault, 1977). In postcolonial Indonesia, however, security forces face an expanded task: not only regulating bodies, but also managing social resonance—the emotional, symbolic, and moral vibrations circulating in communities. This points to an "apparatus of listening," where institutions do not merely monitor but genuinely listen. In this framework, the soft hand is not simply the absence of violence or the opposite of the hard hand, but institutional sensitivity: the moral-affective capacity to read social rhythms and respond with emotional intelligence. It aims to transform conflict into dialogue and tension into resonance. In Indonesia Gelap 2025, where candles and silence became political language, soft hand policing means being present not to suppress the formation, but to keep the silence meaningful.

Such presence requires a shift from harsh law enforcement to attentive law enforcement—care enforcement (Couldry, 2010). Law should be treated less as a command system and more as a moral space that protects the right to speak without fear. Soft hand ethics operates between discipline and compassion, firmness and gentleness, power and care (Ahmed, 2004). This aligns with Tyler's procedural justice: legitimacy is built not by outcomes alone, but by how power is exercised (Tyler, 2006). When people feel respected, listened to, and treated fairly, compliance follows without coercion. Legitimacy then comes not from uniforms or weapons, but from being a trusted listener—an authority grounded in moral maturity, especially in symbolic, affect-laden actions like Indonesia Gelap 2025.

Listening here is not passive; it is reflective practice. Emotions shape social meaning, and police presence amid grief or anger functions as mediation between state and citizens, order and freedom. Soft hand policing therefore presupposes restraint and reflective presence: officers do not always need to command; sometimes they "stand between," acting as calm witnesses to public unrest (Butler, 2015). Even institutional silence can communicate self-control, respect for public space, and recognition that power has ethical limits. In Foucault's sense, ethics is an aesthetic of existence—how one governs oneself before others (Foucault, 1990). Soft hand becomes the art of presence within the field of power.

This approach reframes policing as participation in building civilized public space. In polarized situations, restraint gives time for public voice to take form. This is not weakness, but resonant authority: authority that adapts to society's moral frequency. Rancière's idea of redistributing the sensible applies here—opening space for the unheard to appear and be recognized (Rancière, 2004). A disciplinary apparatus focuses on bodies and movement; a listening apparatus focuses on meaning and relationships, treating society as a moral community rather than an anonymous mass. Soft hand thus becomes civic empathy—a bridge between law and humanity—and an opportunity to rebuild trust eroded by structural violence and biased representation.

Evidence-based policing also supports this orientation: effective security is not simply swift or harsh, but grounded in understanding social context and public emotion (Sherman, 2002). Soft hand policing turns officers into reflective field readers, acting as moral mediators. Small gestures—offering water, calming tension, listening to grievances—can carry greater political weight than force deployment. Soft Polri does not mean weak Polri, but a Polri that knows when to be silent and when to speak, when to reprimand and when to embrace: guardians not only of state order, but of social vibrations and public dignity.

Finally, soft hand ethics intersects with parrhesia—the courage to speak truth without violence (Foucault, 2001). Here it becomes institutional parrhesia: the state "speaks" through empathy rather than intimidation. When officers lower shields, remove helmets, or meet citizens' eyes without fear, they signal a radical truth— that state and people need not be enemies, but co-seekers of justice. In Indonesia's plural context, soft hand policing can become a culturally grounded ethic, resonating with nguwongke wong (humanizing humans) and rahmatan lil 'alamin—care that embraces all. In this sense, soft hand is not only a security strategy but a cultural one: sustaining order through trust rather than fear.

Parrhesia, humanity, and the ethical responsibility of state apparatus

Foucault places parrhesia—the courage to speak truth—at the core of ancient political ethics, now lost in modern society (Foucault, 2001). He describes parrhesiastes as individuals who speak not because of power, but because they hold the truth capable of correcting power. Parrhesia is a risky moral act, where the speaker risks themselves for the public good. In a world where political language is often strategic, the courage to reveal truth has become subversive. Yet Foucault reminds us that parrhesia also requires the courage to listen (Foucault, 2005). Truth comes not only from speech but also from ears willing to accept risks—the risk of changing one's views and being touched by others' suffering. This ethics of listening transforms the state from a soulless machine to a political entity. Indonesia Gelap 2025 invites the state to relearn how to listen to its citizens.

Spivak adds a postcolonial layer to parrhesia, emphasizing the need to consider who speaks and to whom (Spivak, 2010). Subaltern voices are at risk not only of being silenced but absorbed, sterilized, or turned into decorative rhetoric. This makes the ethics of listening crucial: not to justify, but to allow space for others to remain "others." In a world where everyone wants to speak, the revolutionary act may be silence and listening. For the Indonesian National Police, parrhesia demands a shift from law enforcement to truth accompaniment—walking alongside the people, not above them (Tyler, 2006). Police become moral mediators between law and justice. Soft hand policing is not weakness but institutional parrhesia: enforcing law with empathy, revealing truth without destroying others' feelings.

Rancière writes that true politics happens when "the invisible becomes visible, and the inaudible becomes audible" (Rancière, 1999). In the Indonesia Gelap 2025 action, the people spoke the truth with their bodies through silence. The state was tested: did it still have ears to hear? A soft hand response, rooted in empathy, practices the parrhesia of listening—a deeper truth than words alone. This ethics of parrhesia also implies responsibility. State officials must not hide people's suffering behind statistics or silence criticism with stability jargon (Foucault, 2010). They must also admit mistakes, a form of care for the government's soul (Foucault, 2010). A country that reflects on itself is morally healthy.

In Indonesia, these ideas align with local values like eling lan waspada (remember and be alert) and ngerti, ngrasa, nglakoni (understand, feel, and act) (Magnis-Suseno, 1999). These values emphasize restraint and inner balance—key to Javanese leadership ethics. Soft hand policing can be seen as spiritual statecraft: maintaining order through awareness of the interconnectedness of souls. Indonesia Gelap 2025 is not just a protest but a moment of ethical enlightenment. It forces us to ask: Does the state still have the courage to hear uncomfortable truths? Soft hand is the courage not to oppress others' speech. Both parrhesia and soft hand policing are not techniques but attitudes of the soul, born out of respect for life.

The Indonesian National Police now has an opportunity to become a parrhesiastic institution—a guardian of truth that is gentle yet firm, humane yet disciplined, rational yet compassionate. It can be a guardian of resonance amid political noise, a mediator of conversation amid algorithms, and a beacon of light amid

distrust. This is not an easy task, but as Foucault wrote, "truth is never the privilege of those in power; it is the lifelong work of those who dare to love humanity" (Foucault, 2011). In a humane democracy, the state and people walk side by side, under a dim but sufficient light, showing the way toward humanity.

CONCLUSION

The analysis and discussion above highlight the profound relevance of Gayatri Chakravorty Spivak's question, "Can the Subaltern Speak?" in the context of the "Indonesia Gelap 2025" demonstration. This question not only addresses whether marginalized groups have a voice but also critically examines how social, political, and epistemic systems in Indonesia listen. Mass actions born from a crisis of confidence in the state's narrative show that silence, symbols, and performance are legitimate forms of political articulation. Spivak's theory emphasizes that such actions are not meaningless cries, but "alternative languages" that seek to bridge the gap between official discourse and the lived experiences of the people. The subaltern's voice in this context does not seek to replace the state's language but to challenge and reconfigure the power relations that inhibit equal dialogue.

The study further reveals how Indonesia Gelap 2025 marks a shift in Indonesia's public space from one of representation to one of resonance. Here, the people do not wait for permission to be heard but create their own form of communication through collective symbols, visual expressions, and performative actions. This resonates with Jacques Rancière's idea of politics as a "sensitive redistribution," an attempt to redefine what is seen, heard, and understood in social order. Thus, demonstrations like Indonesia Gelap 2025 are not merely protests, but also acts of knowledge production and social awareness that challenge the epistemic dominance of the state. The people speak not by mimicking the elite's language but by creating a new language that arises from their own life experiences and collective struggles.

Regarding institutional roles, the Indonesian National Police (Polri) faces a significant challenge in navigating these new forms of political communication. Polri's function must evolve from merely enforcing order to becoming the guardians of social resonance. This means the police must shift from a disciplinary apparatus to a dialogical one—from security enforcers to democracy facilitators. The "soft-hand" policing approach based on empathy and dialogue is not just an operational strategy, but also an ethical reflection of a more humane governmentality, as understood in Michel Foucault's framework. In this new role, the police not only enforce the law but also uphold humanity by listening, interpreting symbols, and maintaining an affective balance between the state and the people.

The research confirms that subaltern resistance does not always take confrontational forms but often emerges through affective and aesthetic strategies. Indonesia Gelap 2025 demonstrates how political action can manifest as happening art, where the body, light, and silence become transformative tools. The Cultural Studies approach uncovers this dimension by viewing politics not just as power but also as meaning, feeling, and representation. Here, aesthetics and ethics intertwine: the manner in which the people express their suffering is a way of restoring their dignity. Thus, the subaltern's struggle is not only to speak but to reclaim their ability to create meaning in a world that often refuses to listen.

Ultimately, these findings point to a new epistemic awareness: listening is a political act. Spivak's question extends beyond "Can the subaltern speak?" to ask, "Can we listen without dominating?" This is the essence of postcolonial ethics—an ethic that does not treat knowledge as an instrument of power, but as a bridge of empathy. In this vision, the state, society, and institutions like the National Police must rebuild a collective paradigm of listening—open, reflective, and resonant. If the state learns to listen with its heart and not just with the law, democracy will no longer be a procedural system but a shared space where truth can grow from the grassroots.

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Disaster Prevention Strategy at Gelora Bung Karno Main Stadium from the Perspective of the Police Role

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Abstract

Disaster risk is formed by the interaction of hazards with a vulnerable community. Risks arising from intentional hazards are generally more predictable than those from natural and technological causes. Therefore, when a hazard is predictable, a disaster can be prevented. On October 1, 2022, a major disaster occurred at Kanjuruhan Stadium, Malang Regency, East Java, Indonesia, following a Liga 1 Indonesia professional football match between Arema FC and Persebaya, resulting in 712 casualties, including 132 fatalities, 96 serious injuries, and 484 minor injuries. Strengthening the police's role in disaster prevention at stadiums is essential to minimize the likelihood of similar incidents in the future. This study aims to formulate a disaster prevention strategy from the police role perspective from the case study of the 2024-2025 Liga 1 football match between Persija Jakarta and Dewa United at the Gelora Bung Karno Main Stadium (SUGBK) on September 16, 2024. A qualitative approach was applied through interviews and literature review, analyzed using qualitative SWOT analysis and descriptive analysis. The findings show that Polda Metro Jaya conducted a risk assessment in accordance with existing regulations. The study concludes that the risk assessment performed by the Directorate of Vital Object Protection of Polda Metro Jaya for SUGBK was rated good, ensuring the match could proceed safely. Furthermore, the police play an important role in the disaster prevention strategy at SUGBK. However, current regulation only provides guidelines for risk assessment in sports competitions, and do not yet comprehensively address other mass gatherings such as entertainment or religious events.

Keywords*: disaster, strategy, crowd, swot, police.*

INTRODUCTION

According to Aristotle (384–322 BC), human beings are social creatures who, within the context of community life, require the presence of others to attain happiness as the ultimate goal of human existence (Gottlieb, 2022). Within society, among these groups is the police, whose function is to maintain order and interact with both individuals and other social institutions (Palmiotto & Unnithan, 2011).

Life in society, however, inevitably involves the possibility of undesirable events such as disasters. An event can be classified as a disaster when humans are adversely affected by a hazardous phenomenon (Degg & Homan, 2005). Disasters can be differentiated based on their triggering hazards: natural hazards such as volcanic eruptions and earthquakes; technological hazards such as system failures and transport accidents; and intentional hazards, which arise from deliberate human decisions to engage in antisocial behavior, including terrorism, war, and riots (Coppola, 2015).

Although disasters are commonly associated with natural phenomena, the deadliest events in recorded history, such as wars and influenza pandemics, were not triggered by natural hazards (Coppola & Maloney, 2017). Human-induced or man-made disasters have also occurred in stadiums. Stadiums represent important venues for communities worldwide, serving not only sporting events but also religious, cultural, and other large-scale gatherings. However, inadequate safety planning has historically resulted in stadium disasters involving fires, structural failures, crowd unrest, stampedes, security lapses, and other incidents (Tin et al., 2023).

Several major stadium disasters are documented in history, as summarized in Figure 1. In 1964, the world's deadliest stadium disaster occurred at the Estadio Nacional in Lima, Peru, claiming 320 lives (Darby et al., 2005). Similar tragedies occurred in Europe, most notably the Hillsborough Stadium disaster in England, which caused 96 deaths, and in Africa at the Accra Sports Stadium in Ghana, where 126 spectators were killed.

Figure 1: Distribution of Death Toll due to crowd-related disasters (Fajar, 2024)

Indonesia has experienced a similar catastrophe. On 1 October 2022, a disaster unfolded at Kanjuruhan Stadium, Malang, following an Indonesian Liga 1 football match between Persebaya Surabaya and Arema FC during the eleventh week of the 2022–2023 season. The tragedy resulted in 712 victims, including 132 fatalities, 96 serious injuries, and 484 minor or moderate injuries (TGIPF, 2022). Football is the most popular sport globally, and Indonesia has one of the largest fan bases (AC Nielsen, 2022). The intense fan culture surrounding Indonesian football clubs increases the likelihood of stadium-related disasters.

The Kanjuruhan disaster serves as a stark reminder that Indonesia must undertake comprehensive reforms in disaster management for all football events. Disaster management is inherently multidisciplinary and requires effective collaboration among multiple agencies and fields of expertise (Sarı & Özer, 2024). In Indonesia, coordination among institutions such as the Ministry of Youth and Sports (Kemenpora), the Football Association of Indonesia (PSSI), and the Indonesian National Police (Polri) is essential to prevent similar events in the future.

Stadium disasters continue to occur globally, as exemplified by the 2023 incident at the Cuscatlán Stadium in San Salvador, El Salvador (García et al., 2024). This reinforces the urgency of disaster prevention not only in Indonesia but worldwide. Disaster prevention is a core component of disaster management (Carter, 2008), and state institutions, including the police, play a crucial role. Globally, police institutions are tasked with maintaining public order and safeguarding a nation's social system (Palmiotto & Unnithan, 2011). Sociologists analyze the police role from three major perspectives: functionalism, which emphasizes the police contribution to maintaining social order; conflict theory, which suggests the police represent the

interests of societal elites; and interactionism, which focuses on the meanings and interactions produced in police public encounters. A society's system of social control is deeply shaped by its cultural characteristics.

Although the police are widely recognized for their law enforcement function, their responsibilities extend beyond that role. The Indonesian National Police Act (Law No. 2/2002), Article 5(1), defines Polri as a state instrument tasked with maintaining public order and security, enforcing the law, and providing protection, guidance, and services to ensure domestic stability. The police mandate is further supported by the authority granted through legal instruments. However, the Surabaya District Court Decision No. 13/Pid.B/2023/PN Sby indicates that the use of tear gas by police at Kanjuruhan triggered panic among spectators densely packed toward the stadium exits, causing many to fall, be trampled, or suffocate, ultimately resulting in numerous deaths and injuries. In this context, the police failed to fulfill their statutory role as protectors during the event. According to Law No. 2/2002, Article 14(1)(i), Polri is responsible for protecting life, property, communities, and the environment from threats to order and disasters.

To fulfill its role in ensuring safety during sporting events, the Chief of the Indonesian National Police enacted Police Regulation No. 10/2022 on security arrangements for sports competitions. The regulation requires risk assessments to be conducted before event permits are issued. Risk assessment is a critical measure for preventing violence and crowd disorder (Pearson & Stott, 2022). However, the current regulatory framework has not yet provided specific guidance for securing non-sporting crowd events. In this context, the police play a significant role in preventing stadium disasters, thereby reducing the likelihood of recurrence. For this study, the author selected Indonesia's largest and most historically significant venue, frequently used for sporting, religious, political, and cultural mass gatherings. The chosen research site is the SUGBK in Jakarta, which spans 271 hectares and has a seating capacity of 78,000 spectators. This research focuses on the development of disaster prevention strategies for stadium environments before the Indonesian Liga 1 professional football match between Persija Jakarta and Dewa United at SUGBK on 16 September 2024.

DISCUSSION

The development of a disaster prevention strategy for the SUGBK must be understood within the broader theoretical debate on organizational strategy and its applicability to complex, multi-actor safety environments. Classical strategic theory, as articulated by Chandler (1962), emphasizes the primacy of long-term goals, hierarchical structures, and resource allocation. Chandler's findings, derived largely from stable corporate environments, suggest that organizational structure must follow strategy, and that changes in strategic direction typically necessitate corresponding structural adjustments (Robbins, 2017). Although this perspective provides a useful foundation for understanding institutional alignment, its applicability to disaster management, particularly in dynamic mass-gathering environments, appears limited.

In contrast, the strategic framework proposed by Von Neumann and Morgenstern (1944) offers a more flexible and analytically grounded approach. Their conceptualization of strategy as a set of interdependent decisions made in response to specific situations highlights the need for rationality, situational awareness, and responsiveness. Strategy, in this view, is shaped not only by internal organizational attributes but also by the anticipated actions of external actors and changing environmental conditions (Longino, 2011). This perspective aligns more closely with the realities of stadium disaster prevention, where uncertainty, rapid escalation, and multi-stakeholder coordination are inherent characteristics.

To operationalize this strategic orientation, the present study applied SWOT analysis to integrate internal capacities and external pressures affecting police led disaster prevention efforts. This analytical framework enabled the identification of strategic positions (S–O, S–T, W–O, and W–T) that align police strengths with opportunities, mitigate vulnerabilities, and respond to emerging threats (Wulandari, 2018). Importantly, the SWOT derived strategies illustrate that disaster prevention in stadium settings cannot rely solely on structural authority; instead, it requires negotiated coordination, adaptive policing models, and analytical tools that anticipate interactions within a complex socio-technical system.

Overall, the findings emphasize that the police role in stadium disaster prevention must transcend traditional hierarchical paradigms and instead adopt adaptive, interaction-based strategic thinking. This shift is necessary not only to address the multifactorial nature of stadium risks but also to support proactive, collaborative, and analytically informed decision-making. In highly dynamic environments such as mass sporting events, the

Von Neumann perspective provides a more relevant theoretical foundation for developing effective police strategies, ensuring that preventive actions are both situationally responsive and grounded in an understanding of interdependent risk mechanisms.

The Police Role

The findings of this study highlight the centrality of police roles within the broader framework of social control and public safety, reinforcing the notion that roles are socially constructed expectations embedded within normative systems (Jabber et al., 2023). An effective social system, as Parsons (1991) argues, depends on the clarity and stability of role distributions. In the context of stadium disaster prevention, role clarity becomes even more consequential because the interactions among police, spectators, organizers, and emergency actors occur under conditions of heightened risk and dynamic crowd behavior.

The traditional sociological perspectives on policing, functionalism, conflict theory, and interactionism offer valuable interpretive lenses for understanding these roles. From a functionalist perspective, the police contribute to societal integration by maintaining order and facilitating the smooth functioning of social relations. In mass-gathering environments such as stadiums, this function is expressed through crowd management, hazard mitigation, and the provision of reassurance to the public. Conversely, conflict theory draws attention to potential disparities in how police authority is exercised, stressing that institutional power may reproduce inequalities, especially when crowd-control tactics disproportionately affect specific groups or escalate tensions. Interactionist approaches emphasize that police legitimacy is not merely derived from formal authority but emerges through everyday interactions how officers communicate, interpret situations, and engage with spectators. These theoretical perspectives collectively illustrate that police performance is influenced not only by legal mandates but also by cultural expectations, situational dynamics, and public perceptions.

In Indonesia, the legal foundation underpinning police authority is explicitly articulated in Law No. 2 of 2002, which mandates the police to maintain public order, enforce the law, and provide protection and services to ensure internal security. This regulatory framework positions the police as key actors in the state's social protection mandate, aligning with national social policy that encompasses both welfare and security components (Arief, 2001). However, the study's findings suggest that legal authority alone is insufficient to guarantee effective performance in high-risk environments. Public expectations, particularly the demand that police prioritize safety and adopt a guardian-oriented posture, play a significant role in shaping perceptions of legitimacy (Cross & Fine, 2024). In stadium settings, where emotional intensity and crowd density elevate the potential for rapid escalation, legitimacy becomes a crucial determinant of whether police actions are accepted, resisted, or misunderstood by spectators.

The discussion also reveals that the police role must be interpreted not as a static institutional function but as an adaptive practice shaped by situational contingencies. Effective crowd safety requires the police to navigate between these sociological perspectives: fulfilling their functional role in maintaining order, avoiding the pitfalls of coercive practices highlighted by conflict theorists, and fostering positive micro-interactions that strengthen trust and compliance. Such adaptive role performance is particularly important in contexts where previous incidents, such as stadium disasters, have heightened sensitivity to police actions and intensified public scrutiny.

Overall, the study underscores that the police role in stadium disaster prevention is multidimensional, grounded in legal authority yet deeply influenced by social expectations and interactional dynamics. Enhancing the effectiveness of this role requires greater emphasis on communication, legitimacy-building, and role clarity across agencies. These insights contribute to the broader discourse on policing in mass-gathering contexts and highlight the need for policy frameworks that integrate sociological understanding with operational practice.

Qualitative SWOT Analysis as a Disaster Prevention Strategy

This study highlights the increasingly central role of policing in contemporary crowd disaster prevention, particularly within large-scale sporting events such as those held at the SUGBK. The findings demonstrate that technological advancements have reshaped the landscape of crowd monitoring, as illustrated in cases such as Saudi Arabia's use of density monitoring systems during the Hajj (AlQahtany & Abubakar, 2020). Real-

time data analytics, capable of identifying early indicators of hazardous crowd dynamics—including high density, stop-and-go waves, and behavioral anomalies (Luque Sánchez et al., 2020) have proven effective in mitigating intentional hazard-triggered disasters. However, the absence of comparable tools within Polri indicates a significant technological gap that limits the capacity for proactive risk detection and timely intervention.

Within the Indonesian context, disaster prevention strategy formulation relies heavily on identifying internal and external factors that shape police performance (Anjasni, 2013). The SWOT based analysis used in this study reveals that while the organizational structure of Jakarta Regional Police or Polda Metro Jaya (PMJ) provides clarity of authority, division of labor, and strong legal backing, resource constraints continue to challenge operational readiness. Limited numbers of trained risk assessment personnel, uneven distribution of expertise across regions, and dependence on non-tax revenue (PNBP) from event organizers hinder the consistency and quality of risk evaluations. These constraints become more pronounced during periods when multiple mass-gathering events occur simultaneously, straining available personnel and budgets.

Another important finding concerns the relational environment in which policing occurs. Despite formal administrative ties only between PMJ and event organizers, informal collaborations with PPKGBK, the Jakarta Provincial Government, and the Jakarta Raya Military Command expand the support network for event security. Such cooperation enhances preventive capacity but also introduces variability, as informal coordination lacks standardized protocols.

Operationally, the police role in maintaining public order and enforcing the law remains anchored in strong legal mandates and hierarchical discipline, which support effective task execution. The establishment of specialized units such as the Cyber Crime Investigation Directorate further strengthens preventive policing by enabling early detection of digital provocations that may escalate into physical unrest (Feliciani et al., 2024). Yet, on the ground, dynamics remain unpredictable, largely due to inconsistent supporter organizations across football clubs (Harihara Subramanian & Verma, 2022). This unpredictability constrains immediate intervention, particularly as police are restricted to 2nd ring areas under FIFA and PSSI regulations.

The study also underscores the breadth of police functions involved in safeguarding mass events. From pre-event intelligence work and facility protection to emergency health response through Biddokkes, the policing ecosystem operates through multi-layered and interdependent tasks. The identification of diverse threat scenarios spanning ticket fraud, crowd surges, hooliganism, to post-match vandalism illustrates the complexity of risk environments encountered in football matches. The coordination of these functions by the PMJ Operational Bureau reflects an integrated command structure but simultaneously exposes vulnerabilities when capacity, technology, or interagency coordination is insufficient.

Finally, emerging opportunities suggest potential pathways for advancing Polri preventive capabilities. The global development of training in crowd science, risk assessment, and crowd management provides a foundation for strengthening human-resource competencies. Moreover, the increasing engagement of supporter communities in safety and security culture indicates that policing can benefit from community-embedded preventive strategies, shifting some responsibilities from enforcement to co-production of safety (Sebire et al., 2025).

Overall, the discussion reveals that while PMJ displays structural strengths, legal authority, and operational experience, its disaster-preventive capacity remains limited by technological underdevelopment, resource constraints, and external uncertainties in crowd behavior. Bridging these gaps, particularly in real-time monitoring technology, standardized interagency collaboration, and advanced training, emerges as essential for enhancing the police's role in preventing crowd-related disasters in Indonesia. The strategy is summarized in Table 1.

Table 1. SWOT qualitative analysist

SWOT	Strength	Weakness
	- Clear and hierarchical police organizational structure. - Clear division of duties and authority in the work unit. - Strong legal basis, has the authority to force	- Inadequate number of personnel. - Lack of public understanding of safety in stadiums. - Equipment that is not yet modern
Opportunity The amount of training related to *crowd management* Safety-conscious advocates - Concern for related parties about disaster prevention	**SO Strategy** - The police increase the knowledge of their officers with crowd management training, and then the officers provide counseling to the public to increase safety awareness. - With the existing authority, the police are required to provide sufficient information to the audience to help prevent disasters from occurring.	**WO Strategy** - The use of social media to provide counseling related to safety in the stadium. - Collaborating with government institutions and private parties that are concerned with increasing spectator safety awareness in stadiums and conducting more modern risk assessments.
Threat - Not all clubs have well-organised supporters. - FIFA rules about the placement of the police in ring 2, so that there will be a time lag during emergencies	**ST Strategy** - The police require organizers to organize supporters as part of a risk assessment before an event permit is issued.	**WT Strategy** - The police are working with the TNI, the fire department, Satpol PP, and the local security task force (Pamswakarsa) to build an integrated and effective security task force in the event of an emergency.

CONCLUSION

This study demonstrates that the police play an important role in disaster prevention strategies at the SUGBK, particularly through their functions in maintaining public order, enforcing the law, and providing protection and public services. The SWOT analysis reveals that while the policing framework is supported by clear organizational structures and strong legal authority, its effectiveness is constrained by limited technological capacity, resource challenges, and the absence of comprehensive regulatory guidance for diverse mass-gathering events. Current regulations focus primarily on sporting competitions and do not yet encompass other high-density activities such as concerts or religious gatherings. As a result, risk assessments rely heavily on manual observation and prior experience, reducing the potential for early detection of crowd-related hazards. Strengthening technological infrastructure, expanding regulatory scope, and standardizing risk-assessment procedures across event types are, therefore essential steps toward enhancing the police's capacity to prevent crowd-induced disasters in Indonesia's major venues.

SUGGESTION

Based on the findings of this study, several practical recommendations are proposed to enhance the effectiveness of disaster-prevention strategies at SUGBK and similar large-scale venues. First, in strengthening its mandate to maintain public order, Polda Metro Jaya should pursue deeper collaboration with the DKI Jakarta Provincial Government as well as relevant private sector partners. Such cross-sector partnerships would enable the acquisition of additional funding and technological resources, thereby modernizing the risk-assessment process. With improved technological support, risk monitoring could be carried out not only before an event but also in real time during matches, increasing the likelihood of early detection of crowd-related hazards.

Second, to advance its role in public protection and community guidance, Polda Metro Jaya should more strategically engage the Directorate of Community Guidance (Dit Binmas). Enhancing educational outreach, particularly regarding the identification of crowd-related dangers and appropriate preventive behavior, would strengthen community capacity and reduce spectators' vulnerability to potential disasters within SUGBK.

Third, in the context of event-permit management, Polda Metro Jaya should require supporter groups to demonstrate adequate internal organization and safety awareness before the issuance of crowd-gathering permits. Mandating proper supporter governance serves as a preventive mechanism to minimize disorder, especially in high-stakes football matches where fan dynamics may escalate risks.

Finally, as part of its law-enforcement function, the Cyber Crime Directorate of Polda Metro Jaya should enhance its monitoring of online platforms to detect early signs of provocation or misinformation that could trigger crowd unrest. Strengthening digital surveillance capacities enables timely intervention, and when necessary, the initiation of legal processes that generate a deterrent effect and help prevent the recurrence of similar incidents.

Collectively, these measures underscore the importance of institutional strengthening, technological modernization, community engagement, and early threat detection as key pillars for improving police led disaster prevention in large public venues.

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Implementation of Decentralized Systems in Electronic Election Applications

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Abstract

The e-voting system represents a digital innovation designed to enhance efficiency, transparency, and security in the election process. This research discusses the development of a blockchain-based e-voting system built on the Ethereum testnet (Sepolia), integrated with CodeIgniter 4, MySQL, and Tailwind CSS frameworks. The system was developed using the Prototyping method, enabling iterative improvement based on user feedback. The evaluation results indicate that each vote is successfully recorded on the blockchain through a smart contract, providing a verifiable transaction hash (tx_hash) as proof of authenticity. From a usability perspective, 73.7% of respondents stated that the system is easy to use, and 78.9% expressed willingness to adopt it. These findings demonstrate that the proposed blockchain-based e-voting system meets the criteria of usability, security, and user trust, showing strong potential for practical implementation at Esa Unggul University.

Keywords: e-voting, blockchain, codeigniter4, ethereum, prototyping, data security

INTRODUCTION

In the development of information and communication technology, many countries have adopted electronic voting systems or E-voting as a means of expressing opinions in decision-making processes across various democratic contexts such as education, business, social organizations, and government. The purpose of this system is to enhance efficiency, accessibility, and transparency in the election process (Supono & Prutratama, 2018). Electronic voting, also known as e-voting, is a voting process conducted electronically, where digital information from election results is recorded, stored, and processed. David Chaum first introduced the concept of electronic voting (E-voting) in the early 1980s. The system initially utilized cryptography-key technology, which serves to help voters remain anonymous (Dew & Putra, 2022).

The existence of student organizations within a university is essential for student development. This is reinforced by the Law of the Republic of Indonesia No. 12 of 2012 concerning Higher Education, particularly Article 77, which regulates student organizations (Nopardo et al., 2023). One of the student organizations on campus is the Student Executive Board (BEM). BEM is an intra-campus organization established by students, functioning as the executive body at both university and faculty levels. It is led by a president and vice president who are democratically elected. They also have the authority to modify the leadership structure and the overall organization (Munthe et al., 2023).

However, the process of electing the BEM president in many universities is still carried out manually, including at the institution where this study was conducted. This often leads to various issues, such as the

possibility of fraud in vote counting, inaccessible voters, and a lack of transparency in the election process itself. Moreover, the large number of parties involved in vote counting and collection frequently causes bureaucratic complexity and conflicts that take time to resolve (Wulandari et al., 2025).

Electronic voting systems are still not fully developed, as many problems remain unsolved. Through decentralized technology, data and information can be recorded and monitored by multiple parties, thereby enhancing the security, transparency, and efficiency of the voting process (Taş & Tanrıöver, 2020). The utilization of decentralized technology also offers significant security advantages (Harahap et al., 2020).

This study adopts the Prototype system development method because it provides a systematic and structured workflow in software development, from the requirement analysis stage to the system maintenance stage. The Prototype approach is considered appropriate since each stage produces clear outputs that serve as the foundation for the next stage, thereby reducing the likelihood of errors during the development process. The stages of this method include Quick Plan, which involves initial planning to identify user needs and the objectives of the evoting system; Modeling Quick Design, which consists of creating a simple design in the form of an initial prototype that illustrates the system flow, user interface, and interactions; Construction of Prototype, which focuses on developing an interactive model that presents the main system features to assess whether they meet user needs; Deployment, where users test the prototype and provide feedback to identify weaknesses or areas for improvement; and finally, Communication, which involves discussions between developers and stakeholders to ensure that the improvements made align with user requirements before the final system is built.

The object of this study is an electronic voting (e-voting) system used to elect the President and Vice President of the Student Executive Board (BEM). The research aims to analyze and evaluate key elements of the system, including voter data security, system stability, vote-counting accuracy, and the transparency of the election process. Through this analysis, the study seeks to determine the extent to which the e-voting system improves the reliability and trustworthiness of the election process.

For data collection, this research uses a quantitative method that focuses on collecting and analyzing numerical data to test hypotheses. Data were collected using questionnaires or online surveys distributed via Google Forms, allowing for more efficient data collection and analysis. Google Forms offers several advantages, such as flexibility in question types (multiple choice, Likert scale, short answers, and so on), ease of distribution to many respondents, and automatic data storage in Google Sheets, which enables faster and more efficient data processing. However, this method also has limitations, such as the need for an internet connection and the potential for bias if respondents are not randomly selected or do not accurately represent the wider population.

Table 1. Research Questionaire

No.	Question	Answer Options
1	Are you aware that Esa Unggul University is currently developing a system for the election of BEM President and Vice President?	☐ ☐ Yes No
2	Do you think the development of the e-voting application is important to support the election of the BEM President and Vice President?	☐ ☐ Yes No
3	Would you be willing to use the e-voting application in the election once it is officially launched?	☐ ☐ Yes No
4	Do you think the e-voting system is easy for students to use?	☐ ☐ Yes No
5	Do you believe that the security of the e-voting system is very important?	☐ ☐ Yes No
6	Are you familiar with what blockchain technology is?	☐ ☐ Yes No
7	Do you agree that blockchain technology should be used in the e-voting system to protect vote data security?	☐ ☐ Yes No
8	Do you believe that blockchain technology can improve the reliability of the evoting system?	☐ ☐ Yes No
9	Would you use a blockchain-based e-voting system for the next BEM election?	☐ ☐ Yes No

10	Do you feel that your personal data would be secure when using a blockchainbased e-voting system?	☐ ☐ Yes No

Various integrated technologies are used in the development of a blockchain-based e-voting system to ensure security, efficiency, and system stability. The main technologies employed include PHP (CodeIgniter 4) for backend development using the MVC (Model-View-Controller) concept, allowing the system to be more structured, with functions to manage candidate data, user authentication, and communication with Ethereum smart contracts via web3.php. For the user interface, Tailwind CSS is used to create a responsive and modern UI easily. MySQL serves as a relational database to store non-blockchain information such as user data and authentication results before being sent to the blockchain network. On the blockchain side, the system utilizes Ethereum (Sepolia Testnet) as a decentralized platform for recording votes, ensuring that every transaction is permanent and tamperproof. The connection between the application and the Ethereum network is facilitated by Infura, allowing interaction without the need to run a dedicated node. The smart contract, developed using Solidity, acts as the core logic for the voting process, ensuring the security and transparency of votes. System integration is supported by web3.php, a library that bridges communication between the PHP backend and the Ethereum blockchain to read, send, and verify voting transactions.

In the system design stage, a prototyping approach was used through a series of diagrams such as use case, class, activity, and sequence diagrams to illustrate user interactions, process flows, and data structures. The main actors in the system include the admin, user (voter), and candidate. The admin has full control over election management, such as adding candidates, setting schedules, and validating voting results, while users can log in, view candidate profiles, cast votes, and monitor voting status. The system architecture is built in a layered structure, consisting of the frontend (Tailwind-based UI), backend (CodeIgniter 4 API), relational database (MySQL), and Ethereum Sepolia blockchain integration. The deployment process is carried out via an Nginx/Apache-based server running the CodeIgniter application, connected to the blockchain network through RPC providers such as Infura or Alchemy.

In the testing and refinement stage, the prototyping method is applied iteratively. The process begins with identifying user requirements, creating a low-fidelity prototype, evaluating feedback, and then developing a functional prototype connected to the blockchain. Testing includes validating login flows, voting processes, and recording transaction hashes (tx_hash) as proof of vote authenticity on the Sepolia network. The final implementation phase focuses on improving the user interface, adding post-vote notification features, and preparing comprehensive system documentation. With this design and technological integration, the blockchainbased e-voting system is expected to deliver a transparent, secure, and publicly auditable election process.

DISCUSSION

The first stage aims to define the scope and core requirements of the e-voting system. Functional requirements include login/registration, election management, candidate management, one-person-one-vote functionality, and real-time result presentation. Meanwhile, non-functional requirements cover basic security, auditability through transaction trails, and system performance. This stage is based on the principles of requirements engineering, which emphasize elicitation, analysis, and specification of requirements before the prototype is built. The main focus is to agree on a definition of done for each feature so that the prototype can be evaluated objectively.

Table 2. Identification of Core E-Voting System Requirements

ID	Category	Requirement	Brief Description	Priority	Acceptance Criteria
F-01	Authentication	User Registration	New users register (email/student ID + password)	Must	After submitting valid data, the account is saved and can log in; input validation rejects empty or incorrect formats.
F-02	Authentication	User Login	Users log in as Admin/Voter	Must	Valid credentials → redirected to the appropriate dashboard; invalid credentials → clear error message.
F-03	Election Management	CRUD Election	Admin can create, edit, delete, and activate/deactivate elections	Must	Election data is saved; active status only within the specified time frame; changes reflected in the election list.
F-04	Candidate Management	CRUD Candidate	Admin can add/edit/delete candidates for each election	Must	Candidates appear in the relevant election; changes are reflected in real-time in the election details.
F-05	Voting	One Person-One Vote	Each voter can only vote once per election	Must	Second voting attempts in the same election are always rejected (status 4xx + specific message).
F-06	Blockchain	Transaction Recording	Votes are sent to the Ethereum Sepolia network; tx_hash is stored	Must	After a successful vote, tx_hash is stored and linked to (user_id, election_id); UI displays proof of transaction.
F-07	Results	Vote Recapitulation	Display aggregate results for each candidate	Must	Results page shows total votes per candidate, updates after each recorded transaction.
F-08	Auditability	Verification Link	Optional link to explorer (Etherscan) for verifying tx_hash	Should	Clicking the link opens the corresponding transaction details; tx_hash matches the application data.

Based on Table 2, the identified functional requirements indicate that the context of the e-voting system aligns with the needs of both administrators and voters. The system will be developed according to these requirements, as illustrated in the following diagram.
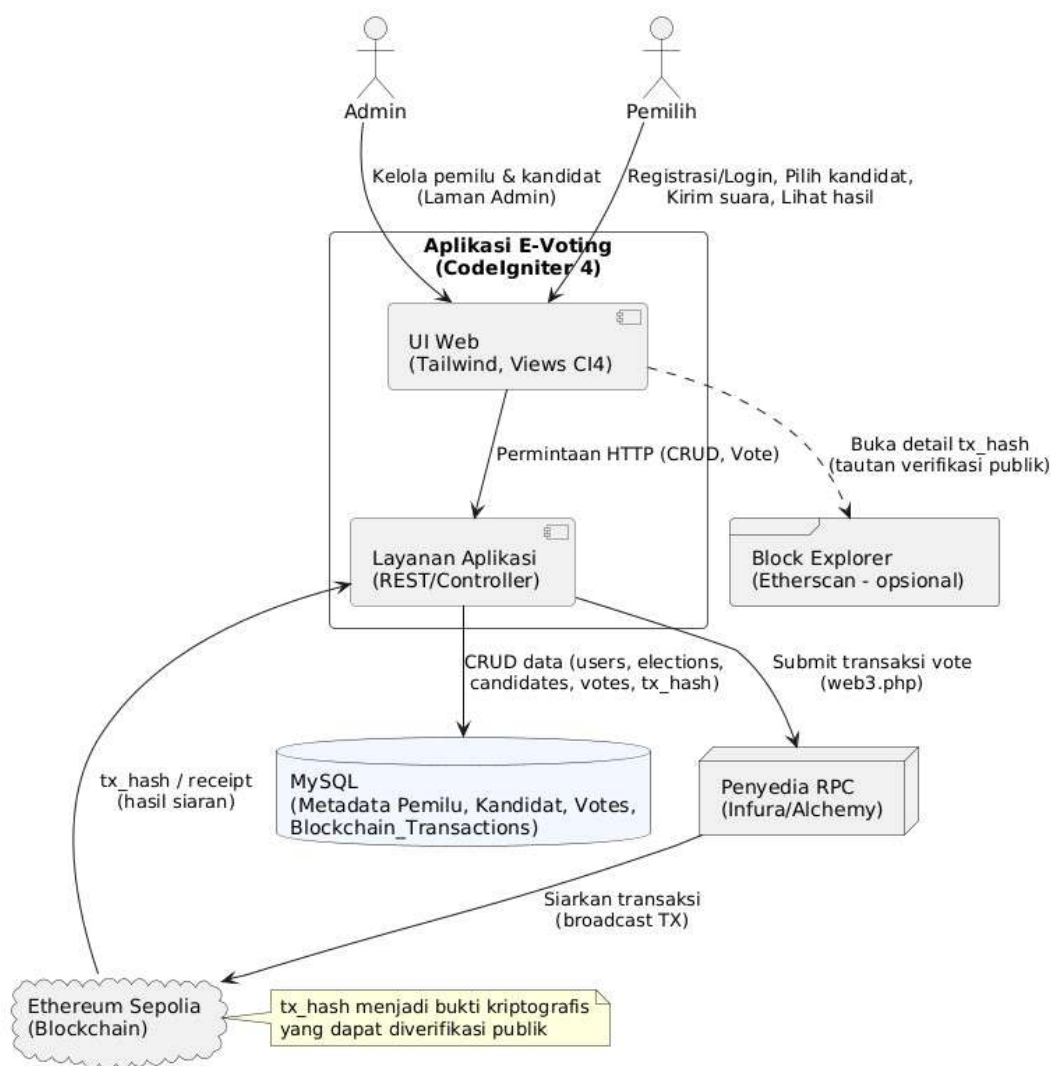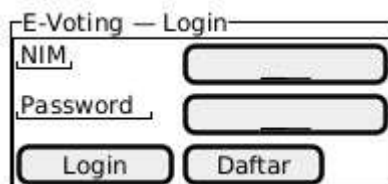
Figure 1. E-Voting System Context Diagram

Development of the Initial Prototype (Low-Fidelity/Wireframe)

The purpose of this stage is to ensure that the flow and organization of interface information are validated before the system is fully implemented, thereby reducing the likelihood of design errors and development costs. This method is based on the concept of human-centered design, where low-fidelity wireframes are used to examine flow and information hierarchy without being distracted by visual details. Although the feedback gathered at this stage is relatively inexpensive, it significantly influences the user experience. Wireframes were created for the Login/Registration, Election List, Candidate Details, Voting Form, and Results pages. Subsequently, an end-toend navigation simulation—from login to viewing election results—was conducted to ensure the system flow was logical. To make key elements easily identifiable, important components such as call-to-action (CTA) buttons, validation messages, and status indicators were clearly marked.
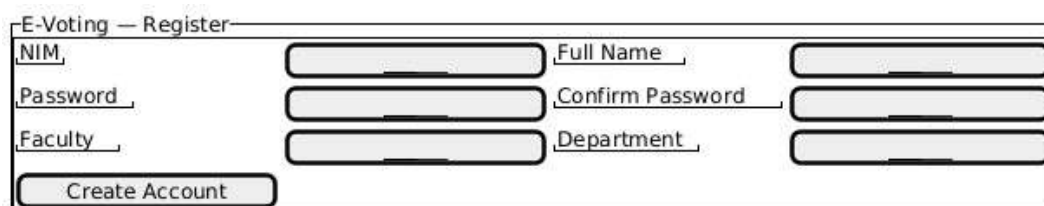
This process resulted in a set of low-fidelity wireframes in PNG format, accompanied by a list of interaction assumptions such as button placement, confirmation texts, and minimal validation rules. Based on the initial evaluation, several issues were identified, including unclear post-vote notifications and the placement of the confirmation button on the voting form, which made some participants feel uncertain.

As a result, the next iteration introduced several improvements: typography size was increased, the contrast of success messages was enhanced, and the results page was updated to include a tx_hash placeholder along with a brief explanation of its function as proof of voting transactions on the blockchain.

Figure 2. Login Page Wireframe

Figure 3 shows the Login page as the starting point of the process. Registered users log in using their student ID (NIM) and password. A "Register Account" link is provided for new users. After successful authentication, the system directs users to the Election List according to their voting eligibility.

Figure 3. Registration Page Wireframe

Figure 4 shows the Registration page for new users. This form collects basic information such as student ID (NIM), name, password, and organizational unit (faculty/department) as the basis for eligibility. After successful registration, users are redirected to the Login page with a confirmation message before proceeding to the Election List.

Figure 4. Election List Wireframe
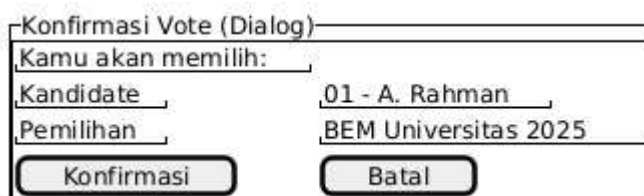
Figure 5 displays the Election List available according to user eligibility. Each election card shows the title, period, and status (active/finished). From this screen, users can select one election to open the Election Details & Candidate page.

Figure 5. Election and Candidate Details Wireframe
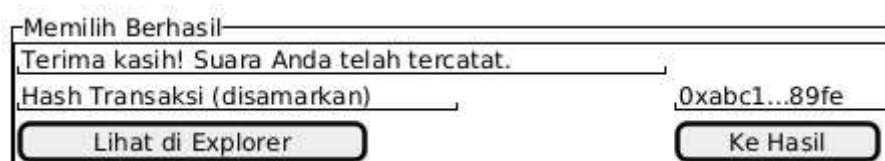
Figure 6 presents the Vote Confirmation screen summarizing the selected candidate and election information. Based on testing findings, the confirmation button's position and label were clarified (e.g., "Submit Vote/Confirm") and placed in a visually distinct area to eliminate ambiguity. Users can cancel or continue. If continued, the system records the vote and processes the transaction proof.

Figure 6. Vote Confirmation Wireframe

Figure 7 shows the Successful Vote Dialog. Following iteration recommendations, typography and contrast for success messages were increased and positioned at the top of the visual hierarchy for better visibility. The dialog also provides next-step options (e.g., "View Results" or "View on Explorer") to ensure the user flow does not end abruptly.

Figure 7 Successful Vote Dialog Wireframe

Figure 8 presents the Results Page, summarizing the total votes per candidate (in chart or table format) along with the election status.

Figure 8. Results Page Wireframe

Prototype Evaluation

The prototype evaluation stage aims to collect empirical data on the usability of the proposed system flow as well as determine the necessary changes before the implementation of core functions. The evaluation was carried out formatively using walkthrough and think-aloud methods, with a focus on identifying cognitive load, points of confusion, and potential errors that could be prevented. This approach is commonly used to minimize the risk of rework in the implementation phase and ensure that the flow of the system is easy for users to understand. The prototype evaluation stage aimed to collect empirical data regarding the usability of the proposed system flow and to determine any necessary changes before implementing the core functions. The evaluation was conducted formatively using walkthrough and think-aloud methods, focusing on identifying cognitive load, points of confusion, and preventable user errors. This approach is commonly used to minimize rework risk during the implementation phase and ensure that the system flow is easy to understand for users.

The evaluation process gathered empirical data on the usability and user acceptance of the blockchain-based evoting system being developed. The formative evaluation employed the walkthrough and think-aloud methods, in which participants interacted directly with the prototype while expressing their experiences and feedback. A total of 19 respondents participated in this trial and completed a questionnaire consisting of ten closed-ended questions with "Yes" and "No" options. The evaluation results were used to assess the system's ease of use, user trust, and readiness to adopt blockchain technology.

1. Awareness of System Development

About 52.6% of respondents (10 out of 19) were aware that Esa Unggul University was developing an evoting system for the election of the Student Executive Board (BEM) President and Vice President, while 47.4% were unaware. This finding suggests that the project's socialization efforts need to be improved so that all students understand the purpose and benefits of the system being developed.

2. Importance of E-Voting Application Development

The majority of respondents (78.9%) believed that developing an e-voting application is important to support the BEM election process, while 21.1% thought otherwise. This positive perception indicates that students view the digitalization of elections as an efficient step aligned with campus organizational needs.

3. Willingness to Use the System

Most respondents (78.9%) expressed their willingness to use the e-voting application once it is officially launched. This result reflects a high level of acceptance and readiness to adopt the new system. Factors influencing this positive response include ease of access, time efficiency, and trust in a more modern system.

4. Ease of Use

A total of 73.7% of respondents (14 people) stated that the e-voting system was easy to use, while 26.3% still found it somewhat difficult. Walkthrough observations revealed that some respondents experienced confusion regarding the placement of the confirmation button and the appearance of post-vote notifications. Based on these findings, improvements were made in the next iteration by clarifying the button placement and enlarging the size and contrast of success messages to make them more prominent in the visual hierarchy.
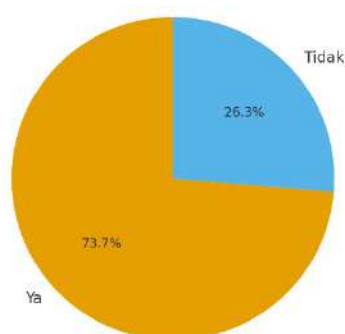

Figure 9. Diagram of Perceived Ease of Use of the E-Voting System

5. Perception of System Security

A total of 68.4% of respondents stated that security is a crucial aspect of the e-voting system, while 31.6% did not consider it a top priority. This finding confirms that the security factor is a key determinant of system acceptance, particularly in ensuring the integrity of vote data and the authenticity of election results.

Persepsi Pentingnya Keamanan Sistem E-Voting
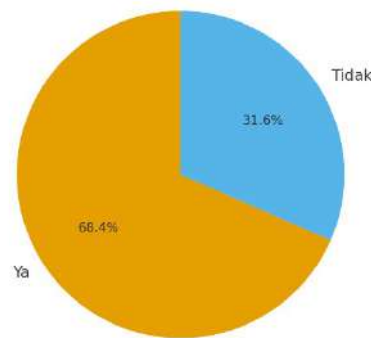
**Figure 10.** Diagram of Perceived Importance of E-Voting System Security

6. Knowledge of Blockchain Technology

Approximately 63.2% of respondents reported being familiar with blockchain technology, while 36.8% were not yet familiar with the concept. However, most respondents who were initially unfamiliar with blockchain expressed enthusiasm after receiving a brief explanation of its function as a secure and transparent transaction recording system.

7. Support for the Use of Blockchain

The majority of respondents (73.7%) agreed that blockchain should be used in the e-voting system to maintain the security of voting data, while 26.3% disagreed. This result indicates that students understand the potential of blockchain to ensure the security and transparency of the election process.

Dukungan terhadap Penggunaan Blockchain dalam Sistem E-Voting
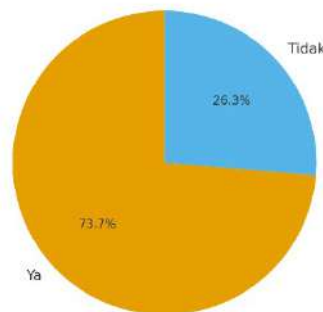
Figure 11. Diagram of Support for the Use of Blockchain in the E-Voting System

8. Confidence in the Reliability of Blockchain

A total of 78.9% of respondents believed that blockchain technology could enhance the reliability of the e-voting system, while 21.1% remained uncertain. This demonstrates that blockchain is perceived as a solution capable of strengthening trust in system integrity and preventing vote manipulation.

9. Intention to Use the System in Future Elections

Around 68.4% of respondents expressed their intention to use the blockchain-based e-voting system in future elections, while 31.6% were still uncertain. This data shows that trust and interest in using the system are already quite high, although some respondents are waiting to see proof of system stability after full implementation.

Niat Penggunaan Sistem E-Voting Berbasis Blockchain pada Pemilihan Berikutnya
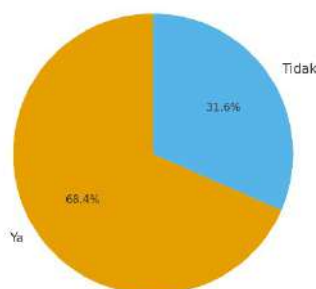
Figure 12. Diagram of Intention to Use the Blockchain-Based E-Voting System in Future Elections

10. Perception of Personal Data Security

Most respondents (73.7%) felt that their personal data would be safe when using the blockchain-based evoting system, while 26.3% were still unsure. This finding suggests that implementing blockchain has successfully enhanced perceptions of security and trust in user privacy protection.

Based on the prototype evaluation results, it can be concluded that the developed blockchain-based e-voting system meets the aspects of usability, trust, and user readiness. The majority of respondents considered the system easy to use (73.7%) and showed a high level of acceptance toward blockchain technology implementation (73.7%–78.9%).

However, attention is still needed to refine certain interface elements, particularly the placement of confirmation buttons and notification visibility, to ensure more intuitive user interactions. Overall, the evaluation results indicate that the prototype has strong potential for broader implementation as a secure, transparent, and easily accessible digital voting platform within Esa Unggul University.

Advanced Prototype

The purpose of the advanced prototype stage is to execute the core functions of the e-voting system. The main features include the one-person-one-vote mechanism and the recording of votes on the Ethereum Sepolia blockchain to generate a tx_hash as cryptographic proof. Implementation follows the requirements outlined in stages 1–3, ensuring data security through server-side validation and an on-chain audit trail. This method enhances accountability and minimizes potential disputes regarding election results.

At this stage, election and candidate CRUD operations, as well as the login/registration module, are implemented using CodeIgniter 4 with MySQL as the database. Once voter eligibility and election period validations are passed, transactions are transmitted via web3.php using RPC. The tx_hash is stored, and users can view their transaction proof. Additionally, edge cases—such as duplicate voting attempts, inactive periods, and network or transaction failures—are properly handled.

Evaluation Results and Key Findings:

1. The functional end-to-end prototype operated successfully in the testing environment.
2. Duplicate voting attempts for the same election consistently failed.
3. Both the **tx_hash** and transaction logs were securely stored and traceable for audit purposes.

Final Implementation

The final stage focuses on refining the interface, standardizing terminology, and preparing prototype documentation to ensure the results can be easily reproduced and verified. This phase emphasizes visual consistency and report structure while ensuring that each interface element and artifact supports clear presentation and auditing.

Procedures/Activities:

1. Improve UI/UX aspects such as typography, status colors, icons, and element naming.
2. Collect screenshots with consistent numbering based on references in the documentation.
3. Cross-verify the final list of figures and references to ensure accuracy.

Outputs/Deliverables:

1. A stable prototype ready for testing.
2. A package of screenshots with consistent captions and sufficient resolution for supporting documentation.
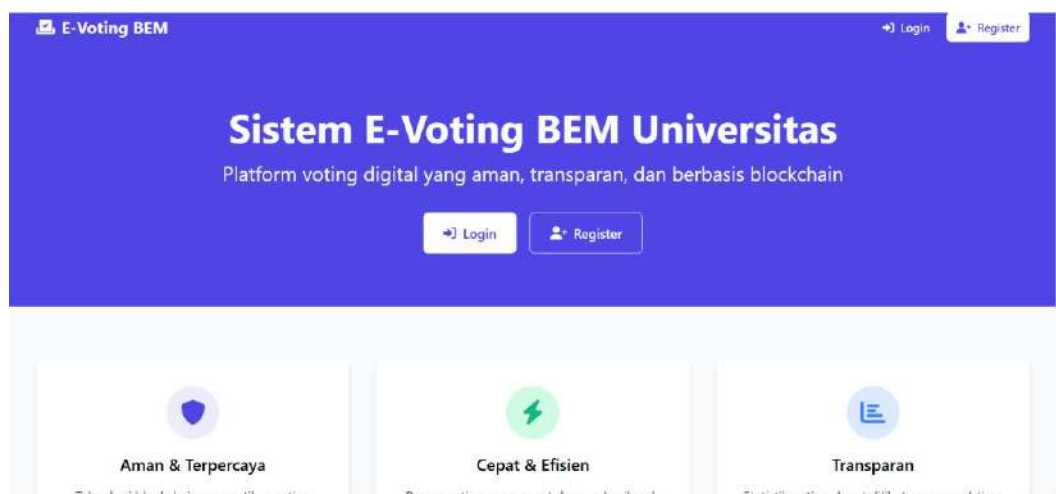
System Interface Design

Two essential components in developing digital applications are **UI (User Interface)** and **UX (User Experience)**. The blockchain-based e-voting system developed in this study exemplifies how both components work harmoniously to create an application that is not only visually appealing but also user-friendly for both voters and administrators.

The User Interface (UI) includes visual elements that directly interact with users, such as page layout, color schemes, icons, and navigation button designs like "Login," "Register," and "Logout." In this e-voting system, the interface predominantly uses blue tones to convey professionalism and trust. The layout is designed to be simple and symmetrical, ensuring ease of navigation and intuitive use.

Understanding and applying UI/UX principles are crucial in designing this application. The combination of a well-crafted interface (UI) and an optimized user experience (UX) results in an effective, accessible, and userfriendly e-voting system.
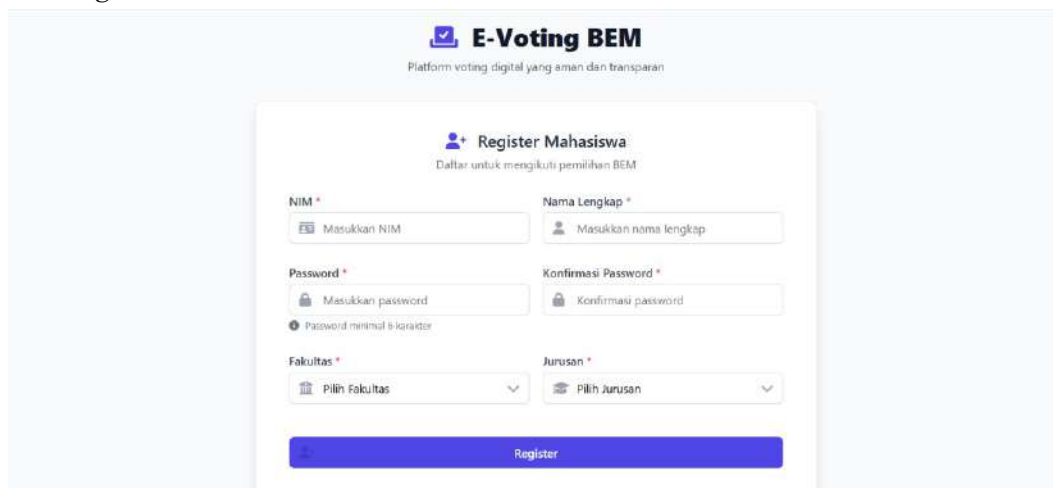
The following section provides further explanation of the UI/UX elements implemented in the e-voting system. **1) Halaman Dashboard Users**

Figure 13. Home Page

The home page display on the *e-vote* system is designed as the starting point for user interaction by displaying opening, login and registration messages. The interface is built in a simple and responsive manner for all users with a calm and professional color dominance.
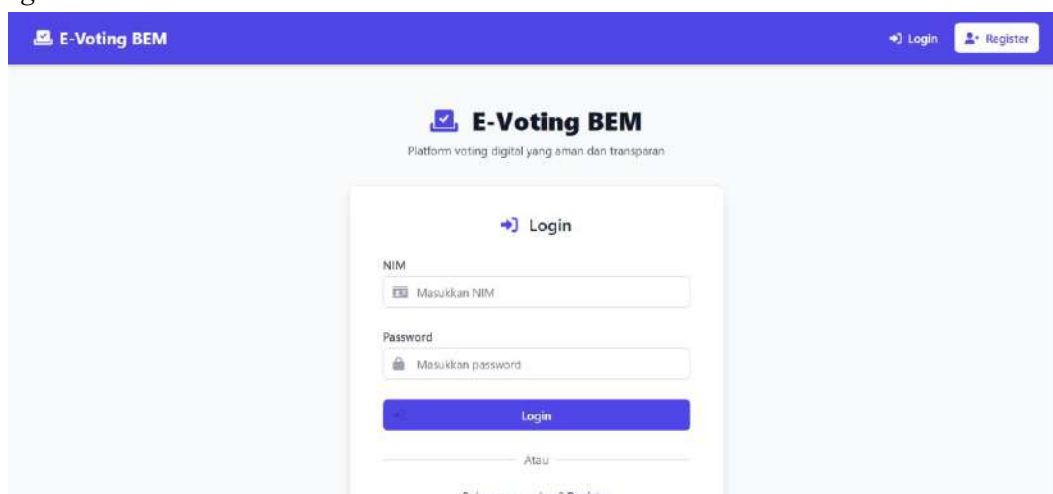
Registration Page

Figure 14. Registration Page

The register display is the second step for users to register as voters in the system *e-voting.* On this page, users are asked to fill in personal information such as, student identification number, full name, *password*confirmation *password*, faculties and departments. When the user has filled in *form* registration correctly and correctly, then the next step is to register, then the system will be directed by the system to the login page.

Login Page

Figure 15. Login Page

After filling out the *registration form* is complete, users will be directed to the login page. On this page, users are asked to enter their student identification number and password that has previously been registered on the registration page. If the user enters the data correctly, the system will be directed to the e-vote Dashboard page

Selection Display

a.   BEM E-Voting Dashboard Page

This page, shown in this image, serves as an information center for users once they log in to the system. At the top of the page, you will find a navigation menu that includes the Dashboard, Elections, and the profile of a user named Joko Prabowo. Data about election activity is displayed in the three main information boxes below. The Active Election Box has a number of 1 indicating that an election is in progress, the Voting Box has a number of 0 indicating that the user has not yet completed the election process, and the Unvoting Box has a number 1 indicating that the user still has one election that has not yet been followed.
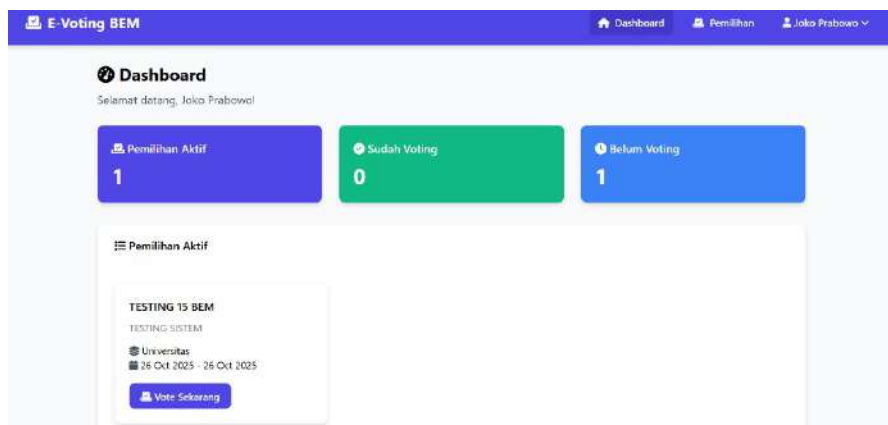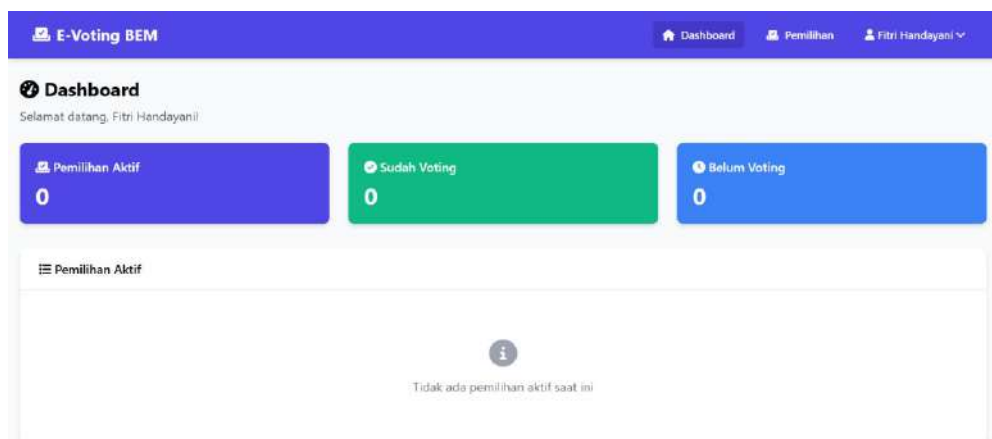
Figure 16. Election Dashboard Page

b.   Viewing After Voting

After the user votes, the system will issue a notification containing the date and time of voting, verification of my vote, and view it on *Etherscan.* In this case, users can look into *the Etherscan* which will be directed to the Sepolia website page.
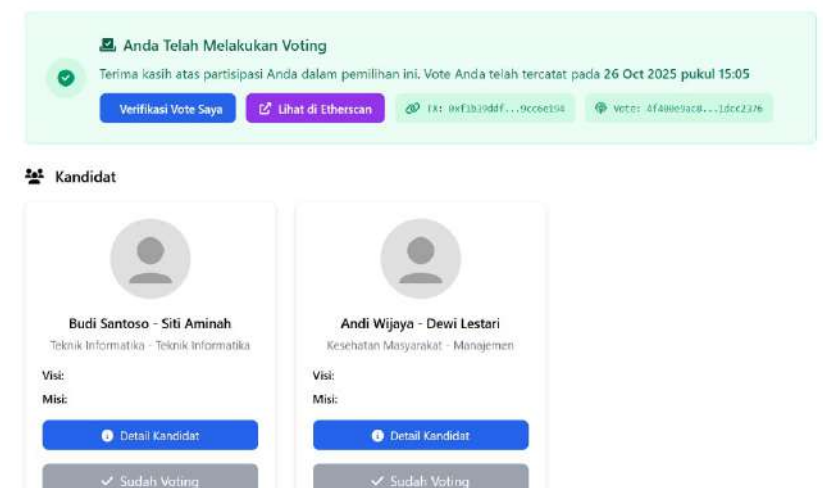
Figure 17. Successful Voting View

Halaman Dashboard E-Vote

Figure 18. Dashboard E-Vote

Three main indicators in the main part of the dashboard serve to provide quick information about the status of the election implementation: Active Election, Already Voting, and Not Voting. The image shows that all three

are zero, which indicates that the user is not involved in the selection. In addition, the panel that says "Active Elections" is at the bottom and displays the message "There are no active elections at this time" as a sign that the system does not have running election data yet.

Overall, the dashboard interface is simple and easy to use. Users don't need to open additional menus to quickly see the status of their selection. The colors used also help differentiate each category of information, making the data displayed clearer.

Verification of Voting Results
Users can verify previously selected votes by viewing in *Etherscan.* The *Etherscan* display on Sepolia is aimed at verifying the data selected by the user, ensuring that the selected selection is correct.
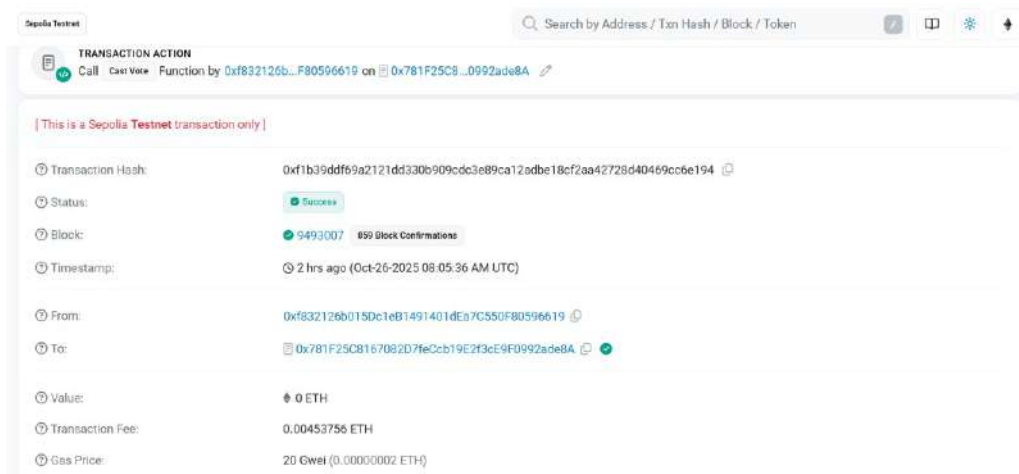
Figure 19. Verification of Voting By Spolia

Figure 20. Etherscan Verification Results

Completed Voting View
After the election ended, the candidate pair of Budi Santoso and Siti Aminah was officially decided as the absolute winner by obtaining 1 vote, which is equivalent to 100% of all votes cast. Although the results show that voters are fully engaged, the participation rate is still very low. Only one in 13 eligible voters in the university environment exercise their right to vote. Thus, the Participation Rate is 7.69%.

Figure 21. Voting Results Display

System Testing

At this time, a testing process is being carried out on a developed e-voting system that is based on blockchain. The Blackbox testing method, which focuses on the functionality of the system without checking the program code directly, is used to perform the tests. The goal of this test is to ensure that each feature of the app works according to the needs and produces the expected results.

The test scenario includes all the main features of the system, such as the login process, user registration, candidate management by admins, the voting process, and the real-time display of the vote results. The results of these tests are used as a basis for evaluation to assess the success rate of system implementation and find the possibility of errors in certain processes.
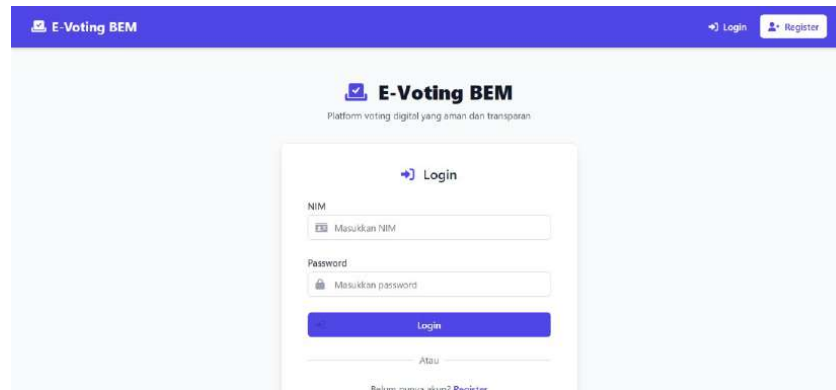
Scenario : User Login Successful

In these cases, the user's login process is tested to ensure that the system can correctly identify the user and display the page according to its function. The testing steps carried out include:

a) User Open the login page on the e-voting application
b) The user enters the correct credentials in the form of a student identification number and password
c) The user presses the sign-in or sign-in button to initiate authentication
d) The system will verify whether the data is already registered in the database

Expected result (Expected result): The system successfully identifies the correct login data and directs users to the dashboard page according to their role (Admin or Selector). The header section of the dashboard page displays the username and role as a sign that the login process has been successful

Table 3. Successful Login Scenario

Ts ID	Test Steps	Expected Results	Current	Status
01	Log in, enter your Student Identification Number and password	Login is successful and redirected to the dashboard page	NIM :20230007 Password : password7	[Passed]

Figure 22. Login Testing
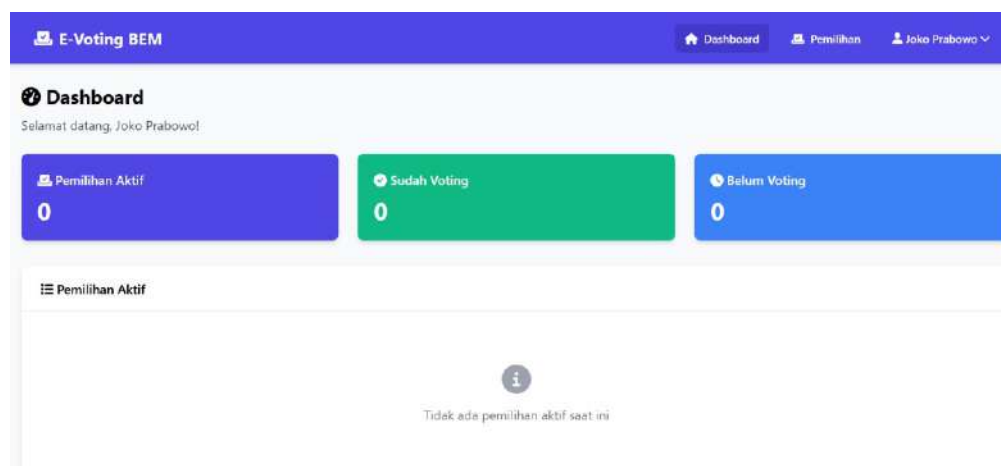
Figure 23. Login Successful – Dashboard Appears 2) Scenario : Login failed

In this case, the login process is tested when the user enters the wrong password. This is done to ensure that the system can reject incorrect authentication and send the correct error message. The testing steps include:

a)   Go to the login page
b)   Enter the correct NIM and the wrong password
c)   Click the login button
d)   The system will display the wrong NIM or Password message

Table 4. Login Failed Scenario

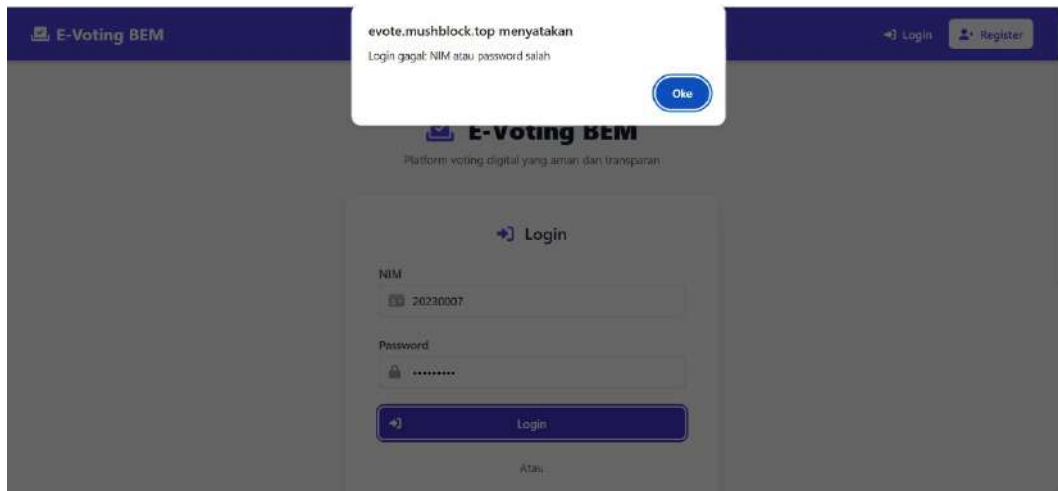| Ts ID	Test Steps	Expected Results	Current	Status
02	Login, enter the wrong Student Identification Number and password	The login fails, and the system will display the message "NIM or Password incorrect"	NIM :20230007 Password password7	[Passed] :

Figure 24. Login Failed

Scenario : Voter Voting Page

Users who have successfully logged in can vote for candidates available for election on the voter voting page. This page displays a list of candidates with information such as names, photos, and short visions, making it easy for voters to make a decision. The voting page in the UI is designed to be easy to understand and use. Each candidate is displayed in the form of an easy-to-understand card or list with a "Vote" button. The use of colors and icons is intended to provide a comfortable visual experience for users and differentiate candidates.
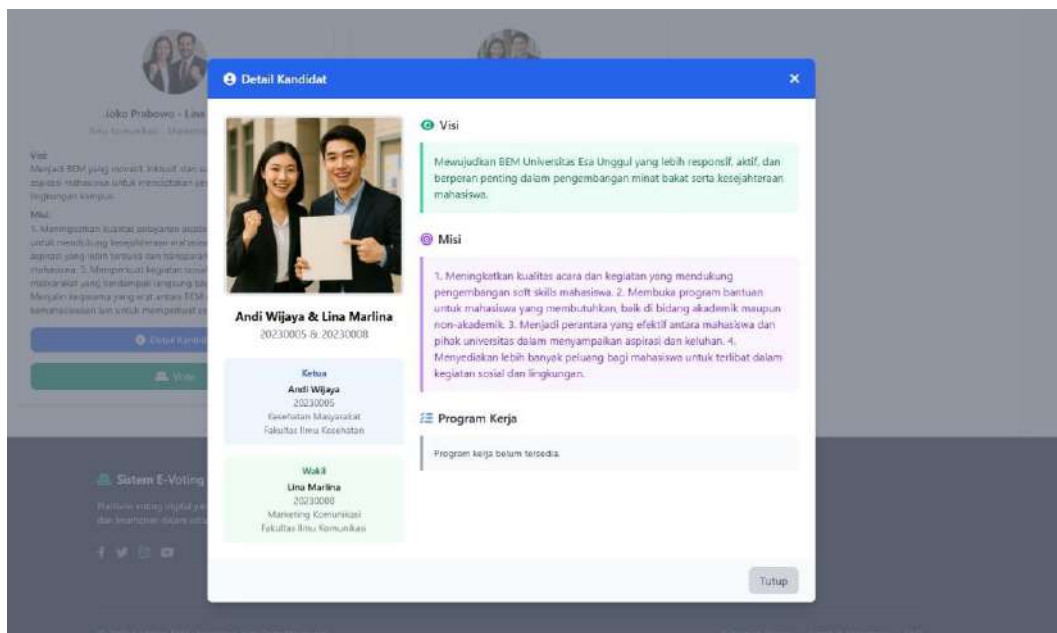
Figure 25. Election Candidate Details 4) Scenario : Successful Voting Process

In this scenario, voter accounts that have never voted are used to test the voting process to ensure that the system can correctly record voter choices into the blockchain network.

    a)   The testing process is carried out as follows:
    b)   Log in as a voter who has not yet voted
    c)   Select the available candidates on the e-voting dashboard
    d)   Click the vote button
    e)   The system will send the transaction to the blockchain and display the transaction hash

Table 5. Scenario : Successful Voting Process

Ts ID	Test Steps	Expected Results	Current	Status
03	Log in as a selector2. Select a candidate3. Click the "Vote" button4. System send transactions to the blockchain	generate a hash of a valid transaction; transaction status in Etherscan = Good; Increased Voice	A valid form of hash transaction; the transaction status on Etherscan is successful; the number of votes increases; Voters can no longer cast their votes.	[Passed]

Scenario : Double Voting Prevention
This situation was created to ensure that the e-voting system can maintain the integrity of the vote by preventing voters from voting more than once.
The testing process is carried out as follows:

   a) Log in as a voter who has voted in the previous scenario.
   b) Re-access the voting page.
   c) Try voting for another/the same candidate.
   d) Expected Output: The system rejects the second vote; displays the message 'You have voted'. There are no new transactions.
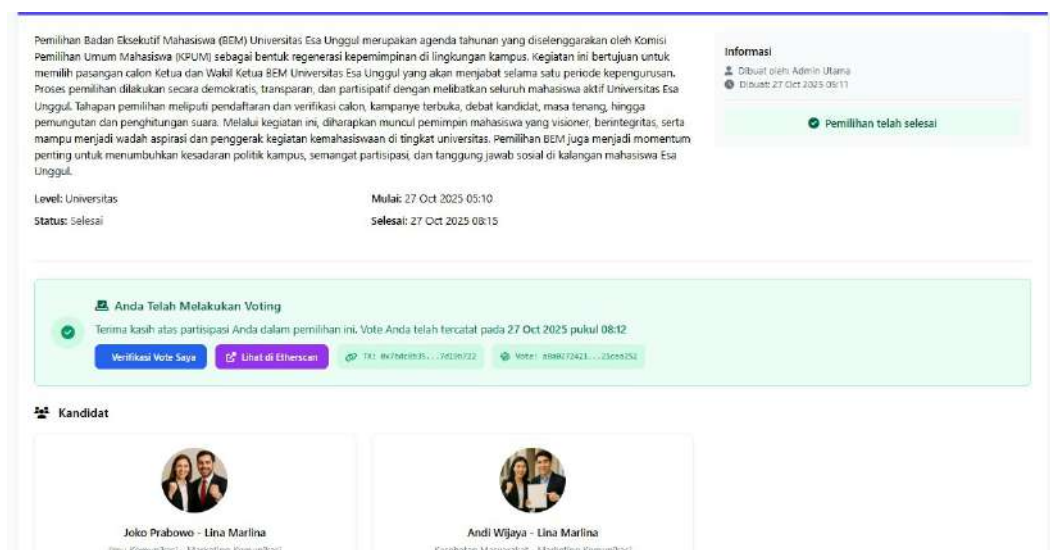
Figure 26. Testing to Prevent Double Voting

Table 6. Scenario : Double Voting Prevention

Ts ID	Test Steps	Expected Results	Current	Status
04	Prevention of double voting	generate a hash of a valid transaction; transaction status in Etherscan = Good; Increased Voice	A valid form of hash transaction; the transaction status on Etherscan is successful; the number of votes increases; Voters can no longer cast their votes.	[Passed]

Scenario : Real-Time Voting Results Visualization
At this point, the election result visualization feature is tested to ensure that the system can display the voting results accurately and according to the data stored on the blockchain. The test also aims to verify that the process of capturing and displaying the data of the vote results is running smoothly, and that the system can provide administrators with clear information about how each candidate got their vote. Expected Results:

Table 7. Scenario: Real-Time Voting Results Visualization

Ts ID	Test Steps	Expected Results	Current	Status
05	1. Access the result visualization feature. 2. Enter input: The admin opens the results page. 3. Click the process button and observe the result.	The graph of voting results appears according to blockchain data.	Users can view the voting results when the time is up.	[Passed]

CONCLUSION
This research aims to design and implement a blockchain-based e-voting system that is secure, transparent, and easy to use in the environment of Esa Unggul University. Based on the results of the design, implementation, and evaluation that have been carried out, several important conclusions were obtained.

First, the system developed successfully answered the main problems related to the security and integrity of voting data in the election process. The application of decentralized technology using the Ethereum blockchain (Sepolia testnet) allows each vote to be recorded in the form of an immutable transaction hash (tx_hash), thus increasing the transparency and accountability of voting results.

Second, through the prototyping development method, the system can be developed gradually by involving users in the feedback process. This approach is effective for finding and fixing weaknesses in the early stages, especially in the aspects of the interface and the flow of user interaction.

Third, the results of the evaluation through the questionnaire showed that the majority of respondents (more than 70%) stated that the system was easy to use, safe, and feasible to implement. As many as 73.7% of respondents considered the system easy to use, 68.4% considered system security very important, 73.7% supported the use of blockchain, and 68.4% stated that they would be willing to use this system in the next election. These results prove that the prototype design has met the aspects of usability, trust, and readiness from the user side.

Fourth, from a technical aspect, the integration between CodeIgniter 4, MySQL, and Ethereum is stable. The three-layered architecture applied, including the user interface, application logic, and database layers, is able to desegregate the management of relational data and blockchain transaction data well.

Finally, this study concludes that the developed blockchain-based e-voting system has been able to improve the reliability, security, and trust of users compared to conventional systems. However, the display and user experience aspects still need to be improved, especially in the placement of the confirmation button and the clarity of post-voting notifications, to make user interaction more intuitive.

SUGGESTION

Based on the results of the research that has been conducted, there are several suggestions for further development and implementation. First, this e-voting system should be integrated with the campus's Single Sign-On (SSO) so that the user authentication process becomes safer and more efficient. Second, the use of blockchain testnets can be upgraded to hybrid or mainnet networks to ensure more realistic transaction validation and resistance to network disruption. Third, it is recommended to add data encryption and digital signatures to each vote to strengthen security and prevent identity abuse.

In addition, it is necessary to conduct advanced usability testing using a quantitative scale such as the System Usability Scale (SUS) to obtain an objective value from the user experience. The user interface (UI/UX) aspect also needs to be improved through wider testing so that the system can be used comfortably by different groups of users.

Finally, before being fully implemented, the system needs to undergo an external security audit of the smart contract and data storage architecture to ensure optimal transparency and accuracy. With these various improvements, this blockchain-based e-voting system is expected to become a reliable, efficient, and adaptive digital election model for campus needs in the future.

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Renewing the Paradigm of Police Science in the Era of Plural Policing

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Abstract

This conceptual article examines the renewal of police science in Indonesia in response to the rise of plural policing and the gradual softening of the state's monopoly on legitimate force. Drawing on Weber, Loader, Jones and Newburn, Johnston and Shearing, as well as recent Indonesian scholarship, the paper first maps the configuration of plural policing and the fragmentation of security actors involving Polri, the armed forces, local government units, private security providers, and community-based organisations. It then analyses the implications of this fragmentation for legitimacy, accountability, and public trust in Polri, using empirical evidence from Jakarta and related Indonesian studies. The article argues for a paradigm shift that repositions Polri as a network manager within a framework of democratic security governance and outlines key implications for regulation, oversight, professional education, and future police science research.

Keywords: plural policing, police science, public trust, security governance, Indonesia

INTRODUCTION

Over the last two decades, global and national security landscapes have undergone profound change. The modern state, as formulated by Weber, is defined inter alia by its capacity to monopolise the legitimate use of physical force within a given territory (Weber, 1978). In contemporary practice, however, policing functions are no longer carried out exclusively by a single state police organisation, but by a range of actors who jointly produce security. This condition is widely described in the literature as plural policing (Loader, 2000; Jones & Newburn, 2006).

Globally, debates about policing have been shaped by repeated controversies over excessive use of force, racially biased practices, and declining public confidence in police institutions. Comparative studies in North America and Europe document how incidents such as deaths in police custody, large-scale protests, and corruption scandals have triggered successive waves of reform—from the adoption of community and problem-oriented policing to experiments with civilian oversight and independent complaints mechanisms (Bayley, 1994; Reiner, 2010; Walker & Archbold, 2014). At the same time, the growth of private security, transnational policing arrangements, and digital surveillance has produced what Brodeur (2010) calls a "policing web", in which public police are only one node in a much more complex network of security provision. These developments provide an important comparative backdrop for understanding plural policing in Indonesia.

In Indonesia, plural policing is reflected in a particularly diverse configuration of security actors. Law of the Republic of Indonesia Number 2 of 2002 affirms that the Indonesian National Police (Polri) is a state apparatus mandated to maintain public security and order, enforce the law, and provide protection, guidance, and services to the community. At the same time, the legal framework recognises the existence of special police, civil servant investigators (PPNS), and community-based security units as holders of policing functions outside Polri. In everyday practice, the security field also involves the armed forces (TNI) in military operations other than war, municipal police (Satpol PP), private security companies, in-house security guards, customary institutions, religious organisations, and civil society groups in maintaining order and resolving conflicts (Gaussyah, 2014; Bahan Ajar Ilmu Kepolisian, n.d.; Panggabean, 2015).

Earlier Indonesian studies have already shown how security provision is shaped by tensions between national and local interests, overlapping mandates, and evolving democratic norms. Analyses of Satpol PP and local government security provision indicate that security sector reform and decentralisation have created ambiguous divisions of labour and contested authority between Polri, local governments, and other actors (Poerba & Wahyurudhanto, 2010; Wahyurudhanto, 2011a, 2011b, 2014). Debates about the role of local government security units, the quality of security services, and the politicisation of security provision provide an important empirical and conceptual backdrop for the present discussion of plural policing.

The pluralisation of security actors generates both opportunities and vulnerabilities. On the one hand, the presence of multiple actors allows security services to reach wider areas, operate closer to communities, and respond more sensitively to local contexts. On the other hand, the distribution of policing functions to actors whose regulation, capacity, and accountability mechanisms vary considerably risks producing overlapping mandates, double standards, and human rights violations that are difficult to trace and to hold accountable (UNODC, 2011). In a democratic rule-of-law state, these issues are not merely matters of technical coordination; they go to the heart of the state's claim to a monopoly on legitimate force and the quality of security governance more broadly.

Empirical research in Indonesia indicates that public trust in the police is strongly influenced by perceptions of accountability, performance, and moral alignment with societal values, with accountability emerging as the strongest predictor in recent survey-based studies (Wahyurudhanto, 2022). Related conceptual work on legitimacy, police discretion, and police culture similarly emphasises that everyday exercises of authority and the internal norms that guide them are central to how communities evaluate the police (Tyler, 2006; Tankebe, 2014; Wahyurudhanto & Pratistha, 2025). In short, debates about plural policing cannot be separated from broader questions of democratic legitimacy, public trust, and the moral foundations of security provision in Indonesia.

Within this global and national context, Indonesia faces its own distinctive challenges. Rapid urbanisation, persistent inequality, social media–driven mobilisation, and localised communal tensions all place pressure on existing policing arrangements. For Polri, responding to these pressures involves not only improving operational performance, but also strengthening legitimacy through procedural justice and respect for human rights (Tyler, 1990; Bottoms & Tankebe, 2012). The benefits of the present study are therefore twofold. Conceptually, it seeks to enrich police science by bringing insights from plural policing and security governance debates into dialogue with Indonesian experiences. Practically, it aims to inform ongoing reform initiatives within Polri—such as efforts to build a "precision" policing model and enhance transparency—by clarifying the role of the police within a plural security ecosystem.

More specifically, this article pursues three interrelated objectives. First, it maps key conceptual developments in the international literature on plural policing, democratic policing, and the governance of security, and identifies their relevance for police science in Indonesia. Second, it describes and analyses the configuration of security actors in Indonesia, highlighting patterns of overlap, co-operation, and tension between Polri, other state agencies, private security providers, and community-based organisations. Third, it proposes directions for renewing the paradigm of police science so that it can better support democratic security governance, with particular attention to issues of legitimacy, accountability, and public trust in the context of plural policing. In doing so, it builds on the author's previous work on security sector reform, local security provision, and policing in the midst of democratisation, as well as more recent analyses of community and participatory

policing in digital environments (Poerba & Wahyurudhanto, 2010; Wahyurudhanto, 2011a, 2011b, 2014; Wahyurudhanto, Pratistha, & Lindrianasari, 2025).

Methodologically, the article employs a qualitative, conceptual approach in the form of an integrative literature review. The "data" for the study consist of three main sources: international theoretical and empirical works on policing and security governance; Indonesian regulations and policy documents concerning Polri and other security actors; and previous empirical research on police performance, accountability, and public trust, including survey-based work in Jakarta (Wahyurudhanto, 2022) and analyses of multi-agency policing in religious conflict (Panggabean, 2015). These materials are analysed thematically to identify recurring concepts, tensions, and gaps. The problem-solving plan is to synthesise these insights into a conceptual framework that clarifies how Polri can exercise normative leadership and network management functions in a plural policing environment while upholding democratic rule-of-law principles.

At the same time, existing debates on plural policing and security governance have largely been developed in Western contexts, where historical trajectories of state formation, welfare provision, and civil–military relations differ in important ways from those of post-authoritarian and post-colonial countries. This creates a distinctive research gap that the present article seeks to address. By bringing Indonesian empirical experiences and conceptual debates into dialogue with global theoretical work, it aims to show how plural policing unfolds in a setting marked by democratic transition, security sector reform, and decentralisation. In doing so, the article argues that Indonesian police science can make a substantive contribution to wider discussions about democratic security governance in the Global South, rather than merely importing models and concepts developed elsewhere.

DISCUSSION

Police Science, Plural Policing, and the Governance of Security

Police science initially developed as a body of practical knowledge related to technical police tasks such as investigation, inquiry, patrol, and protection. As demands for democratisation and the rule of law have intensified, police science has increasingly been positioned as an applied social science that examines the functions, organisation, practices, and governance of policing in its relationship with society and the state (Bahan Ajar Ilmu Kepolisian, n.d.; Greene, 2014). In international literature, the term police science reflects efforts to situate the study of policing within a multidisciplinary, empirical, and comparative research tradition that intersects with criminology, sociology, political science, public policy, and legal studies (CEPOL, 2020).

Historically, the evolution of police science has closely followed changes in dominant policing models. Early professional models emphasised centralised command, rapid response, and crime control, reflecting a bureaucratic and state-centred understanding of policing (Reiner, 2010). Subsequent developments such as problem-oriented policing shifted attention to the systematic analysis of underlying conditions that generate crime and disorder, calling for tailored interventions and inter-agency collaboration (Goldstein, 1979; Braga, 2014). Community policing, in turn, foregrounded partnership with citizens and local institutions as a key strategy for enhancing both legitimacy and effectiveness (Cordner, 2014). These shifts illustrate how police science has gradually moved from a narrow organisational focus to broader concerns with governance, partnership, and problem-solving.

Bayley and Shearing (2001) argue that the new structure of policing is characterised by the rise of non-state providers and the blurring of boundaries between public and private, national and transnational forms of security provision. In their view, the central analytical challenge is to understand how authority, resources, and responsibilities are distributed across different nodes within a security network. Loader and Walker (2007) similarly contend that security should be seen as a public good that must be civilised through democratic regulation and deliberation, rather than left to market forces or state coercion alone. For police science, these arguments imply the need to analyse how public police interact with other security actors, how governance arrangements allocate responsibilities, and how accountability can be ensured across institutional and jurisdictional boundaries.

In this sense, plural policing is not merely an empirical description, but a lens that reshapes core questions of police science. Rather than asking only how to reform the police organisation, scholars and practitioners must also ask how security is produced across networks, what roles public police should play within these networks,

and how citizens experience and evaluate the conduct of multiple security providers. The Indonesian case offers an opportunity to test and refine these theoretical propositions by examining how plural policing unfolds in a legal and political context marked by democratic transition, decentralisation, and ongoing debates about the proper boundaries between police, military, and civilian authorities.

From the perspective of democratic policing, the central question is therefore not simply who produces security, but how policing processes take place in accordance with democratic principles, the rule of law, and respect for human rights. Johnston and Shearing (2003) introduce the notion of the governance of security to explain how security is generated through interactions between government, markets, and civil society across diverse institutional configurations. Within this framework, the role of the state shifts from direct provider to a combination of steering, regulation, and oversight in relation to the various actors involved in the production of security. UNODC (2011) emphasises that police accountability in democratic societies emerges from a constellation of internal and external mechanisms involving codes of ethics, hierarchical supervision, independent oversight bodies, courts, media, and public participation. Under plural policing, these accountability principles are normatively relevant not only for the police, but also for non-police security providers.

European experience, for example, illustrates how supranational governance arrangements can reshape national policing fields. The development of common training standards, shared databases, and joint operations through bodies such as Europol and CEPOL is gradually producing a more integrated, though still uneven, landscape of security provision across member states (CEPOL, 2020). At the same time, the growth of cross-border private security industries and multinational technology firms supplying surveillance, data analytics, and predictive policing tools has further complicated questions of accountability and democratic control. These trends underline the importance of treating plural policing not only as a domestic institutional issue, but also as part of broader transformations in regional and global security governance.

The Configuration of Plural Policing and the Fragmentation of Actors in Indonesia
The configuration of plural policing in Indonesia can be mapped along at least three broad axes. First, state security actors include Polri, TNI in its support roles, the public prosecutor's office, the correctional system, and other law-enforcement agencies with sectoral mandates. Second, local government security actors such as municipal police units (Satpol PP) exercise regulatory and enforcement powers in relation to public order, local regulations, and local revenue (Gaussyah, 2014; Poerba & Wahyurudhanto, 2010; Wahyurudhanto, 2011a, 2011b; Bahan Ajar Ilmu Kepolisian, n.d.). Third, non-state formal actors such as private security companies, in-house security units, and corporate risk management departments operate alongside community-based organisations, religious groups, and informal neighbourhood networks, often in close partnership with local government and civil society organisations (Panggabean, 2015).

Closer examination of this configuration reveals several patterned dynamics. In urban commercial and industrial zones, for example, private security and in-house security units frequently serve as the first visible line of security, while Polri units are mobilised mainly for serious incidents or when formal legal action is required. In many residential areas, neighbourhood security posts, informal organisations, and religious groups play significant roles in preventing and resolving minor conflicts. In conflict-prone regions, multi-agency arrangements involving Polri, TNI, local government, and community leaders are regularly deployed to manage demonstrations, land disputes, and inter-group tensions. These empirical patterns underscore the extent to which everyday security in Indonesia is co-produced by a plurality of actors, even though Polri remains the institution most closely associated with formal law enforcement.

At the same time, regulatory and capacity gaps persist. The licensing, training, and oversight of private security providers, for instance, are not yet governed by a comprehensive framework that fully integrates them into national security governance while safeguarding human rights and labour standards. Community-based security initiatives likewise vary in their adherence to legal norms and in their sensitivity to vulnerable groups. Studies of community-led responses to security problems in other jurisdictions warn that, without clear safeguards, such arrangements can reproduce local power imbalances, exclude minorities, or normalise informal coercion (Brogden & Nijhar, 2005; Moore, 2021). Indonesian debates on security sector reform and the politicisation of security provision similarly highlight how incomplete reforms, overlapping regulations,

and elite interests can slow the consolidation of democratic security governance (Wahyurudhanto, 2014; Darmono et al., 2010). These comparative and national insights point to the need for policymakers and scholars to pay close attention to how plural policing arrangements affect equality before the law and access to justice.

From a governance perspective, a key question is how Polri can exercise leadership within this plural landscape without reverting to an overly centralised or monopolistic posture. Consistent with Bayley and Shearing's (2001) analysis, one option is to conceptualise Polri as a meta-regulator that sets standards, coordinates information flows, and ensures accountability across the network of security providers. This would require institutional mechanisms for accrediting and supervising private security, formalising co-operation with community organisations, and clarifying the respective mandates of Polri, TNI, and other state actors. It would also require investment in data systems capable of capturing incidents and performance indicators across different types of security actors—something that is still at an early stage of development in Indonesia.

In practical terms, experimenting with new forms of coordination can already be observed in a number of Indonesian cities. Joint command posts during large public events, integrated crisis centres, and multi-agency task forces on issues such as terrorism, narcotics, or cybercrime illustrate attempts to move beyond simply dividing territorial jurisdiction and toward more problem-focused and information-driven collaboration. However, these initiatives often remain ad hoc or heavily dependent on the personal relationships of local leaders. From the standpoint of police science, documenting and analysing these experiments in greater depth would provide valuable insights into how plural policing arrangements can be institutionalised without undermining legal safeguards or democratic oversight.

The fragmentation of security actors has direct implications for public trust. When citizens' encounters with different security providers are marked by inconsistent service standards and procedures, feelings of uncertainty, arbitrariness, and injustice arise. Wahyurudhanto's (2022) study shows that accountability, performance, and cooperative culture are important predictors of public satisfaction with and trust in the police. Under conditions of plural policing, this trust depends not only on the behaviour of individual officers, but also on the institutional capacity of Polri to embed ethical norms and accountability standards across the wider family of security actors with whom citizens interact.

Renewing the Paradigm of Police Science in Indonesia
The foregoing analysis suggests that police science in Indonesia must be renewed along three main lines. First, it needs to take seriously the pluralisation of security provision and move beyond a narrow conception of policing as the monopoly of a single state agency. Instead, police science should be reoriented toward analysing how authority, resources, and responsibilities are distributed across networks of security actors, and how Polri can provide democratic leadership within these networks while respecting constitutional limits on its mandate (Bayley & Shearing, 2001; Loader & Walker, 2007; Poerba & Wahyurudhanto, 2010; Wahyurudhanto, 2011a, 2011b, 2014). This reconceptualisation preserves the distinctive focus of police science on policing institutions and practices, but situates these within a wider ecosystem of security governance and a broader understanding of the state's responsibility to govern all uses of coercion within its jurisdiction.

Second, a shift is needed from an organisational focus to a governance-oriented perspective that places questions of legitimacy, accountability, and public trust at the centre of analysis. This involves treating citizens not merely as clients or recipients of police services, but as co-producers of security whose perceptions and participation shape the effectiveness and acceptability of policing practices. Studies of legitimacy policing, discretionary decision-making, and police culture in Indonesia demonstrate that reforms focused solely on organisational charts or procedures are unlikely to succeed unless they also transform the everyday exercise of authority in encounters between police and citizens (Tyler, 2006; Tankebe, 2014; Wahyurudhanto & Pratistha, 2025).

Third, the ethical, moral, and human rights dimensions of policing need to be strengthened within a good governance framework, alongside a critical engagement with technology. Contemporary debates on predictive

policing, artificial intelligence, and social media–mediated forms of community surveillance underscore both the potential and the risks of technologically mediated policing (McDaniel & Pease, 2021; Narayan, 2023; Wahyurudhanto, Pratistha, & Lindrianasari, 2025). At the same time, work on morality, virtue, and professional ethics in Indonesian public service and policing emphasises the importance of cultivating internalised values and ethical dispositions that can guide officers in complex situations where formal rules provide only limited direction (Wahyurudhanto, 2023). A renewed police science must therefore combine critical scrutiny of new technologies with sustained reflection on the moral foundations of policing, ensuring that innovations in practice remain contestable and consistent with democratic rule-of-law principles.

For police education and training institutions, these shifts imply the need to redesign curricula so that future officers and police managers are equipped not only with operational skills but also with the conceptual tools to navigate complex governance environments. Courses on public administration, human rights law, ethics, data analysis, and community engagement need to be integrated more systematically into basic training, specialist education, and leadership programmes. In addition, closer collaboration between police academies, universities, and research institutes can help to ensure that teaching materials reflect up-to-date empirical findings and expose practitioners to comparative experiences from other jurisdictions. Such efforts would strengthen the capacity of Indonesian police science to function as a reflexive, knowledge-based foundation for democratic policing reforms.

Towards a Conceptual Framework for Democratic Security Governance in Indonesia
Building on the foregoing analysis, this article proposes a conceptual framework for democratic security governance in Indonesia centred on three interlocking pillars. The first pillar is normative. The constitutional commitment to a democratic state based on the rule of law and respect for human rights provides the ultimate benchmark against which all security practices, whether carried out by Polri, other state agencies, private providers, or community groups, must be assessed. This implies that plural policing arrangements cannot be justified solely on grounds of efficiency or expediency; they must also be compatible with principles of legality, accountability, non-discrimination, and proportionality (UNODC, 2011; Walker & Archbold, 2014).

The second pillar is institutional and concerns the role of Polri as a network manager within the broader security ecosystem. In this capacity, Polri is expected to exercise strategic steering rather than direct control over all security activities. Concretely, this involves developing regulatory frameworks for private and community-based security, designing formal partnership mechanisms, and strengthening internal and external oversight bodies that can monitor the conduct of both police and non-police actors (Johnston & Shearing, 2003; Loader & Walker, 2007). It also entails fostering a professional culture that values collaboration, transparency, and reflexive learning rather than a narrow focus on hierarchical authority. Such a role is particularly important in a decentralised polity where local governments and communities have significant influence over how security is organised in practice.

The third pillar is epistemic and relates to the knowledge base required for effective and accountable security governance. A renewed paradigm of police science must be able to generate robust empirical evidence on citizens' experiences of policing and security, the performance of different security providers, and the differential impacts of policing practices across social groups. This calls for investment in interdisciplinary research, improved data collection and analysis capacities within Polri, and stronger linkages between police education institutions, universities, and civil society research centres (CEPOL, 2020; Brodeur, 2010). In this regard, studies of public trust, procedural justice, and perceptions of legitimacy in Indonesia, such as Wahyurudhanto's (2022) work on accountability and cooperative culture, provide important building blocks for a more evidence-informed approach to security governance.

Importantly, the framework also draws attention to the potential tensions and trade-offs between its three pillars. Strengthening legal and human rights safeguards, for example, may initially constrain certain policing tactics or require greater investments in training and oversight. Building more participatory and transparent institutional arrangements can slow down decision-making in the short term, even as it enhances legitimacy and resilience in the long term. Developing robust knowledge infrastructures may reveal uncomfortable evidence about past abuses or institutional weaknesses. Rather than viewing these tensions as obstacles, a

democratic security governance perspective treats them as productive pressures that can drive continuous learning and adaptation within Polri and across the wider security network.

These three pillars can be represented schematically as a triangle in which constitutional–legal principles, institutional arrangements, and knowledge infrastructures mutually reinforce one another. Within this triangle, Polri occupies a central but not exclusive position, acting both as a provider of security and as a guarantor of standards across the plural policing landscape. While the framework offered here is conceptual, it generates a number of concrete research questions and policy implications. for example, how to design accreditation systems for private security, how to measure accountability across different security actors, and how to incorporate plural policing themes into police and postgraduate curricula. Addressing these questions will require sustained collaboration between scholars, practitioners, and policymakers in Indonesia's police science community.

CONCLUSION

This article has argued that plural policing is a defining feature of the contemporary security landscape in Indonesia. Policing functions are performed by interconnected networks of state and non-state actors, such that the classical concept of the state's monopoly on legitimate force must be re-interpreted as a monopoly of normative authority and ultimate responsibility rather than a monopoly of day-to-day implementation. Within this configuration, Polri remains the central actor, but operates within a complex and plural security ecosystem.

From a scholarly perspective, the discussion developed here underscores the importance of treating Indonesian experiences not as marginal or exceptional, but as sites from which to rethink taken-for-granted assumptions in the wider policing literature. The coexistence of strong central institutions with far-reaching decentralisation, the historical involvement of the military in internal security, and the rapid penetration of digital technologies into everyday life all make Indonesia a particularly rich laboratory for studying how plural policing and democratic security governance interact. Future research could build on this article by conducting comparative studies across provinces, tracing the evolution of specific multi-agency initiatives over time, or examining how citizens in different social positions experience and interpret interactions with diverse security actors.

Plural policing opens up opportunities to extend the reach of security services and to strengthen partnerships with communities. At the same time, it generates risks of fragmented authority, double standards, and human rights violations when not accompanied by robust regulatory and accountability frameworks. Citizens' experiences in interacting with various security actors—whether state or non-state—shape their perceptions of the state and of Polri. Empirical research in Jakarta underscores that accountability, performance, and moral alignment with societal values are key factors in building public trust in the police (Wahyurudhanto, 2022). In this sense, the legitimacy of Polri depends both on its own conduct and on its ability to shape the broader field of security provision.

Renewing the paradigm of police science in Indonesia is therefore a strategic necessity. The new paradigm calls for a shift from an inward-looking organisational focus to a broader focus on security governance; from viewing Polri as the sole executor of policing to positioning it as a manager of security networks; and for affirming strong ethical, moral, and human rights commitments in the midst of increasingly intensive use of policing technologies. Strengthening the regulatory framework for plural policing, developing oversight mechanisms that encompass non-police security actors, reforming curricula in police and graduate education, and expanding empirical research agendas in police science are crucial prerequisites if Polri and the wider family of security actors are to perform policing functions in ways that are legitimate, accountable, and consistent with democratic rule-of-law principles.

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