



Posthumous Personal Data Protection in the Era of Digital Eternity: Assessing Indonesia's Legal Framework and the Relevance of Neural Rights

Sayid Muhammad Rifki Noval ^{a,*}, Irma Rachmawati ^b, Ahmad Jamaludin ^c, Deden Sumantry ^d

^a Graduate Program, Doctoral Program in Law, Universitas Pasundan, Jl. Sumatera No.41, Bandung, Indonesia

^b Graduate Program, Master's Program in Notarial Studies, Universitas Pasundan, Jl. Sumatera No.41, Bandung, Indonesia

^c Department of Law, Faculty of Law, Universitas Islam Nusantara, Jl. Soekarno Hatta - No.530, Bandung, Indonesia

^d Graduate Program, Master's in Notarial Studies, Universitas Pasundan, Jl. Sumatera No.41, Bandung, Indonesia

* Corresponding author Email: sayidrifqi@unpas.ac.id

DOI: <https://doi.org/10.54392/ajir2632>

Received: 26-07-2025; Revised: 01-06-2026; Accepted: 24-06-2026; Published: 13-06-2026



Abstract: The development of artificial intelligence and digital memorial technology has given birth to the practice of digital immortality, which is the use of digital imprints, voices, images, and communication patterns of a person to build a virtual representation after the person in question dies. This phenomenon raises new legal issues, especially regarding the status of posthumous personal data, consent limits, the position of heirs, and the responsibility of parties who process data for the purpose of memorialization and interactive digital revival. This article aims to assess the adequacy of Indonesia's legal framework in protecting posthumous personal data and examine the relevance of neural rights as a normative reference. This research uses normative juridical methods with legislative, conceptual, analytical, and comparative approaches. The analysis focused on the 1945 Constitution, the Electronic Information and Transaction Law, and the Personal Data Protection Law, and then compared to regulatory developments in Chile, Mexico, Colorado in the United States, and Brazil. The results of the study show that Indonesian law has not explicitly regulated the protection of personal data after death. As a result, there are still normative gaps regarding the legitimacy of the deceased's data processing, the authority for granting consent, the rights of family or heirs, the limits on the use of data to form a person's virtual representation, and the relationship between posthumous data and the digital inheritance regime. This study also assesses that neural rights are relevant as normative inspirations, but are not sufficient when used as a single basis for regulation. Therefore, a legal reform is needed that explicitly regulates the protection of posthumous personal data in the Indonesian legal system comprehensively.

Keywords: Posthumous Personal Data, Digital Immortality, Personal Data Protection, Neural Rights, Digital Heritage, Indonesian Legal Framework

1. Introduction

The development of artificial intelligence, cloud computing, and digital platforms has expanded the way humans store, display, and process their identities in cyberspace. In this context, the phenomenon of digital immortality or digital immortality has emerged, which is the use of a person's digital footprints such as text, voice, images, videos, metadata, and communication patterns to maintain, reconstruct, or simulate an individual's digital presence after he or she passes away (Galvão *et al.*, 2021; Savin-Baden & Burden, 2018; Harbinja *et al.*, 2023; Hollanek & Nowaczyk-Basińska, 2024). This development shows that biological death no longer always goes hand in hand with the end of a person's digital existence. In practice, generative technology and AI based conversation systems now allow the creation of avatars, holograms, griefbots, or ghostbots that can mimic the expressions, speaking styles, and even personal responses of deceased individuals (Figuerola-Torres, 2024; Reséndiz & Reséndiz, 2024).

Not all forms of post death digital presence pose the same level of risk. The literature distinguishes between one-way memorialization and two way digital revival. One-way memorialization refers to the storage or replay of the



deceased's data for the purpose of documentation, commemoration, or preservation of memories. In contrast, two-way digital awakening involves further processing of data to generate a virtual representation of a person or an interactive digital persona that can dynamically respond to the user as if representing a deceased subject (Galvão *et al.*, 2021; Truby & Brown, 2021). This distinction is important because the level of legal risk is not the same. In one-way memorialization, legal issues tend to revolve around account management, family access, and data archiving. However, in the two way digital revival, the problem extends to the validity of consent, the limits of identity reconstruction, the potential for personality distortion, commercial exploitation, memory manipulation, and the misuse of digital personas for purposes that are contrary to the dignity of the deceased.

The phenomenon is no longer just futuristic speculation. Various contemporary practices show that the digital reconstruction of the deceased is already part of the global digital culture. The emergence of synthetic videos, avatar memorials, and AI grief services shows that personal data can be processed into post-death representations that appear emotionally and visually convincing (Roberts, 2022; Hollanek & Nowaczyk-Basińska, 2024). In Indonesia, the trend of using AI to "revive" photos of deceased parents or family members also shows that the public is beginning to interact with the early forms of digital revival. Although it is partly perceived as a means of nostalgia and healing of grief, the practice also raises serious legal questions. Who has the right to allow the use of the deceased's data, to what extent a digital persona can be formed, and what legal mechanisms are available if the data is used without a legitimate basis.

From a legal point of view, the core of the issue of digital eternity lies in the status of personal data after death. If personal data is understood as an extension of an individual's identity, privacy, and autonomy, then the use of deceased person's data to form a digital entity cannot be treated solely as a technical issue. He touched on the issues of consent, sustainability of will, protection of human dignity, family rights, digital heritage management, and the responsibility of electronic system operators or AI developers. In the cutting-edge literature, debates about post-mortem privacy and digital legacy suggest that death does not automatically remove all legal interests attached to a person's data, especially when it remains accessible, processed, traded, or manipulated after death (Iwasaki, 2024; Figueroa-Torres, 2024; Hollanek & Nowaczyk-Basińska, 2024).

The normative question that then arises is whether the deceased individual still has a legal interest in his or her data, identity, and reputation, or does all that control shift to the family, heirs, or platform? In legal theory, this issue is related to the limits of legal personality, the continuity of dignity, and the recognition of posthumous interests. Even if the subject of the law ends at the time of death, various legal systems still recognize the indirect protection of the honor, good name, will, and family interests of the deceased. Therefore, the study of posthumous personal data protection does not only rely on privacy law, but also intersects with inheritance law, personality law, human rights, and digital technology regulations. In the context of digital eternity, this issue becomes increasingly complex because data is not only stored as an archive, but can be used to produce new communicative actions on behalf of someone who has actually died. The latest legal scholarship shows that post-mortem privacy cannot be simplified into a matter of ownership alone, because the deceased's data contains at the same time elements of privacy, expressive, relational, and economic. Therefore, conventional inheritance regimes are often only able to reach a portion of the value of digital assets, while the interests of dignity, will during life, and identity integrity have not been fully protected (Nwabueze & White, 2024; Klasiček, 2023; Szwajdler, 2023).

In the Indonesian context, the urgency is even higher because the protection of personal data has obtained a constitutional basis through Article 28F and Article 28G paragraph (1) of the 1945 Constitution of the Republic of Indonesia (Indonesia, 1945), and has been further operationalized through the Law on Information and Electronic Transactions (ITE) (JDIH BPK, 2016) and the Personal Data Protection Law (PDP) (Komunikasi & Indonesia, 2022). However, both instruments are essentially designed for living data subjects, yet to explicitly regulate the status of personal data after death, including who is authorized to give consent, who can represent the interests of the deceased, how the relationship between posthumous data and digital inheritance is, as well as what limits are allowed in data processing for the purposes of memorialization or the formation of visual representations of a deceased person. The ITE Law emphasizes the consent of the person concerned in the use of personal data, while the PDP Law places the data subject as an individual who holds a set of control rights over his or her personal data. There are no explicit norms that answer who can act when the data subject has died, how post death consent is proven, and the extent to which the family or heirs can represent the deceased's interests. This normative vacuum has the

potential to create legal uncertainty, especially when technology allows the data of the deceased to be used for commercial, entertainment, propaganda, or psychological manipulation. Thus, the problem faced by Indonesia is not just the absence of technical rules, but the lack of clear rules regarding the protection of posthumous personal data in the national legal ecosystem.

The gap is not only technical, but also theoretical. If data is seen solely as a digital asset, then the problem will be directed towards inheritance and transfer of control. On the other hand, if posthumous data is understood as an extension of identity and dignity, then the law must open up space for post-death protection that is not identical to ordinary inheritance law. Recent studies on digital legacy emphasize the need for a combination of rights mechanisms, family representation, and platform obligations so that the deceased's data is not processed without a legitimate basis or used to build a digital persona that deviates from the will of his or her life (Harbinja *et al.*, 2024; Harbinja *et al.*, 2026; Arisanthi, 2025).

At the same time, global developments indicate that there are efforts to expand legal protections for forms of data that are closely related to identity and mental integrity. Studies on neurorights have developed in response to advances in neurotechnology, specifically to protect mental privacy, personal identity, free will, and protection against algorithmic bias (Do *et al.*, 2024; Waite, 2024). Although neural rights were initially formulated for the context of neurodata, some of its basic principles are relevant for assessing digital perpetuity risk, especially when digital data is used to computationally replicate a person's preferences, mindsets, or visual representations. Nevertheless, the relevance of neural rights to digital eternity cannot be taken for granted. A critical analysis is needed on the extent to which the concept can be adapted into the Indonesian legal framework, whether through legal reform, the establishment of special rules, or constitutional interpretations that emphasize the protection of human dignity and personal integrity.

Based on this background, this article aims to assess the adequacy of Indonesia's legal framework in providing protection for posthumous personal data in the era of digital immortality, as well as to examine the limited relevance of the concept of neural rights as a normative reference for the legal reform agenda. The novelty of this research lies in three things. First, this study systematically distinguishes one-way digital memorialization and two-way digital revival as two forms of practice that contain different consequences and levels of legal risk. Second, this study integrates doctrinal analysis of the 1945 Constitution of the Republic of Indonesia, the ITE Law, and the PDP Law with contemporary debates on post-mortem privacy, digital legacy, and digital inheritance law. Third, this research does not position neurorights as a transplantative solution that can be applied directly, but as a source of normative inspiration that must be adapted in accordance with the constitutional structure and character of the Indonesian legal system.

2. Methodology

This research uses a normative juridical method or doctrinal legal research that focuses on the analysis of basic norms, doctrines, and legal constructions that are relevant to posthumous personal data protection in the era of digital immortality. This approach was chosen because the issues studied lie in the existence or absence of a normative basis, the adequacy of positive legal formulations, and the possibility of developing legal arguments against new problems that have not been strictly regulated. In the tradition of legal research, doctrinal research not only conducts an inventory of regulations, but also interprets, assesses, and systematically builds legal arguments on relevant legal texts and practices (Negara, 2023; Witte, 2022; Byrne & Olsen, 2024).

The approach used includes (a) a legislative approach to read and study the normative structure of Indonesian law (provisions in the 1945 Constitution of the Republic of Indonesia, Law Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Information and Electronic Transactions, and Law Number 27 of 2022 concerning Personal Data Protection); (b) a conceptual approach to explain the concepts of posthumous personal data, digital immortality, digital identity, and mental privacy; (c) an analytical approach to assess whether the applicable norms are adequate in answering legal issues arising from the use of the personal data of deceased persons; (d) a limited case approach to reading the relevant practices and decisions in the appellate jurisdiction; and (e) a comparative approach to assess the possibility of limited adoption of foreign normative ideas after considering Indonesia's constitutional context (Witte, 2022; Samuel, 2021).



The operationalization of the comparative approach was carried out by selecting jurisdictions that functionally faced similar problems, namely Chile, Mexico, Colorado in the United States, and Brazil. The selection of the four jurisdictions is based on the development of regulations or legal initiatives related to the protection of neurodata, mental integrity, sensitive data, and data processing restrictions that intersect with the issue of digital identity and post-death protection. The comparison is carried out in a limited and targeted manner using several criteria, namely: first, whether the law recognizes the protection of data that remains relevant after death; second, who is authorized to give consent or represent the interests of the data subject; third, how the law classifies data that is closely related to identity or mental integrity; fourth, whether there are strict restrictions on the use of data for the reconstruction of virtual representations; and fifth, whether there is an adequate recovery, responsibility, or supervision mechanism. Thus, comparison is not placed as the ultimate goal, but rather as a tool to identify normative gaps and possible national legal reforms (Abiad & Masadeh, 2024; Turenne, 2023; Aftab, 2024).

The primary source of legal material consists of the 1945 Constitution of the Republic of Indonesia, Law Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Information and Electronic Transactions (ITE), as well as Law Number 27 of 2022 concerning Personal Data Protection as well as relevant regulations and comparative legal documents from selected jurisdictions. Secondary legal materials include journal articles, books, and scientific papers that discuss personal data protection, posthumous privacy, digital inheritance, digital eternity, and neural rights. The tertiary legal materials are used to support the exploration of legal terms, concepts, and systematics. The collection of legal materials is carried out through literature studies and systematic document searching, then selected based on substantive relevance and proximity to the formulation of the research problem. In Indonesian normative law research, the use of secondary data through literature study is the main stage before deductive legal reasoning and the preparation of prescriptive conclusions (Negara, 2023; Zainuddin & Karina, 2023).

The analysis technique is carried out qualitatively through grammatical, systematic, and teleological interpretation of Indonesian laws and regulations, then tested with comparative and theoretical secondary materials. This approach was chosen because the issue of posthumous personal data has not yet fully received an explicit answer in Indonesia's positive law, so a doctrinal construction is needed that bridges existing norms with the needs of new regulation. This study applies normative gap analysis by comparing the need for legal protection of posthumous personal data with the scope of norms available in Indonesian law. The adequacy of the Indonesian legal framework is assessed based on several indicators, namely the existence of a definition or recognition of posthumous personal data, the clarity of the basis for consent after death, the position of the family or heirs as a representation of the interests of the deceased, the limits of the use of data to form virtual representations, and the availability of accountability mechanisms and protection of rights. Through this framework, this research not only describes the vacuum of norms, but also formulates a direction for legal reform that is more in line with the principles of human dignity, privacy protection, and the development of digital technology. The use of doctrinal methods in this context is in line with the view that legal research does not stop at reading "law in the books", but must also consider legally relevant practices to produce more adequate normative arguments (Witte, 2022; Byrne & Olsen, 2024). More details about the conceptual framework of the research can be seen in the following figure 1.

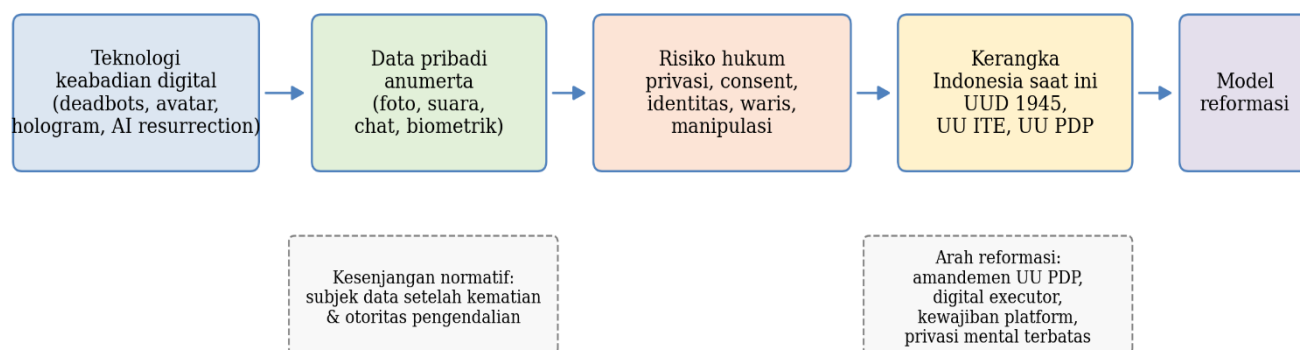


Figure 1. Conceptual Framework for Posthumous Personal Data Protection in the Era of Digital Eternity

3. Results and Discussion

The results and discussion sections are organized into three main subsections, namely: (i) the form of digital permanence and the differentiation of legal risks, (ii) the adequacy of Indonesia's legal framework for posthumous personal data, and (iii) the relevance and limitations of neural rights as an inspiration for legal reform. This preparation is intended to separate conceptual descriptions, positive legal analysis, and normative evaluation so that the article's arguments are more systematic and easy to follow. The latest literature also shows that the issue of digital afterlife cannot be analyzed only as a technological issue, but must be differentiated according to its form of use and legal consequences, especially in the context of ghostbots, deadbots, and interactive digital representations of the post death.

3.1 The Difference between One-Way Memorialization and Two-Way Digital Revival

Substantively, the research findings show that the term digital eternity encompasses at least two forms of practice that need to be distinguished. First, one-way digital memorialization, namely the storage, archiving, or rebroadcasting of the deceased's data for the purpose of commemoration, documentation, or memory preservation. Second, the two-way digital revival, namely the use of deceased data to form virtual representations that are interactive, such as chatbots, avatars, holograms, or conversation simulations that can respond to users dynamically. This distinction is important because the intensity of interventions on identity and data is not the same. In the first form, the legal risks tend to be related to access, account management, or family control over data. In the second form, the legal risk is higher because it concerns the formation of "new communicative measures" on behalf of the deceased, thus potentially causing consent issues, identity distortion, commercial exploitation, and violation of dignity. The latest legal literature also confirms that ghostbots are not just a continuation of memorialization practices, but a new form of data processing that simultaneously results in risks to privacy, property, data protection, and personality rights (Harbinja *et al.*, 2023; Iwasaki, 2024; Hollanek & Nowaczyk-Basińska, 2024).

This distinction is important for Indonesian law because not all posthumous data processing must be treated equally. Control over family photo albums retained as memorials is certainly different from using thousands of private messages and voice recordings to train AI models that generate chatbots as if they represent the consciousness of the deceased. Therefore, legal risks need to be classified based on processing intensity, level of interactivity, and potential impact on dignity, relational privacy, and family interests as seen in the table 1 below.

Table 1. Differentiating the level of risk between one-way memorialization and two-way digital revival

Categories	Example of an activity	Dominant legal interests	Risk level
One-way memorialization	Photo Archive, Memories Page, Account Memorial Mode	Family Access, Deletion, Authentication, Memory Respect	Medium
The rise of two-way digital	Chatbot of the deceased, interactive avatar, responsive hologram	consent, identity, misrepresentation, commercialization, mental inference	Height

3.2 Posthumous Status of Personal Data: Privacy, Dignity and Digital Heritage

The doctrinal debate over posthumous data suggests at least three main approaches. First, the approach that views that the right to privacy ends at death, so that legal intervention is only possible if the use of the data also causes harm to the surviving parties. Second, an approach that places posthumous data as part of the digital legacy, so that post-death control authority can be transferred to the heirs or determined through an instrument of last will. Third, an approach that is gaining increasing attention in the latest literature views posthumous data as a hybrid legal object. In this approach, some data can be treated as a digital asset that can be inherited, while others



still require special legal protection because they are closely related to the identity, reputation, and dignity of the deceased (Nwabueze & White, 2024; Klasiček, 2023; Haneman, 2025).

In the context of digital eternity, a hybrid approach seems more normatively adequate. If the law uses the logic of inheritance alone, the heirs have the potential to be positioned as if they have full authority over all of the deceased's data. In fact, the use of data to build synthetic representations cannot be equated with the receipt of ordinary heritage treasures. This action touches on the issue of identity representation, family collective memory, and the possibility of reproduction of statements, attitudes, or preferences that were never expressed by the deceased during his lifetime. Therefore, inheritance law can serve as an initial representation mechanism, but it is inadequate if it is used as the sole basis for legitimacy for digital resurrection practices. In line with that, the literature on digital legacy emphasizes the importance of explicit instruments, such as digital legacy planning, data trustees, or digital executors, so that the will of data owners can be identified and respected from the time of their lifetime (Harbinja *et al.*, 2023; Harbinja *et al.*, 2026; Arisanthi, 2025).

3.3 Doctrinal analysis of Indonesia's legal framework

From the perspective of Indonesian law, the protection of personal data can be linked first to the constitutional guarantees in Article 28G paragraph (1) of the 1945 Constitution of the Republic of Indonesia concerning personal personal protection, honor, dignity, and security, as well as Article 28H paragraph (4) regarding personal property rights. In the latest development, the Constitutional Court also affirmed that the protection of personal data is an integral part of the right to personal protection based on Article 28G paragraph (1) (Indonesia, 1945). Thus, although the 1945 Constitution of the Republic of Indonesia does not explicitly mention "personal data", a constitutional basis for privacy protection and control over personal information is actually available. However, the issue becomes more complex when the data subject has passed away, as the constitution and its derivative laws have not explicitly explained whether the interest in the data ends immediately upon death, passes to the heirs, or remains protected as part of human dignity that continues indirectly. This void is a crucial point in the issue of posthumous personal data.

At the legal level, Article 26 paragraph (1) of the ITE Law requires consent from the person concerned to the use of personal data through electronic media. The problem arises because the formula does not anticipate the circumstances when the data subject has died. Furthermore, Article 26 paragraph (2) does open the room for lawsuits for losses due to the violation of the rights in question, but does not explicitly specify the party who has legal standing to act after the data subject dies (JDIH BPK, 2016). In addition, the mechanism for the deletion or issuance of irrelevant information as stipulated in Article 26 paragraphs (3) to paragraph (5) still rests on the assumption of the existence of a living subject, or at least a party expressly given legitimacy by law to represent its interests.

The PDP Law (Komunikasi & Indonesia, 2022) strengthens the personal data protection regime by defining personal data as data about an identified or identifiable natural person, as well as granting a number of rights to data subjects, such as the right of access, the right to correction, the right to stop processing, the right to erasure, and the right to compensation. However, precisely because the data subject is formulated as an individual, normative issues arise when the person has passed away. Although the PDP Law prohibits the unlawful acquisition, disclosure and use of personal data, it has not established a specific regime regarding posthumous personal data, has not regulated the transfer of data control authority after death, and has not made a clear distinction between the economic value of digital accounts and the personal-identity value inherent in the content of the data. As a result, doctrinally, the protections built by the PDP Law still operate in the logic of living legal subjects, while digital immortality technology works through the use of data traces that persist after death.

In the Indonesian context, the regulatory vacuum has the potential to raise at least four main problems. First, it is not clear whether the family or heirs can give valid consent to the processing of the deceased's data, including for the purpose of training artificial intelligence models or the formation of digital avatars. Second, there is no specific legal category for high-risk data that allows the reproduction of the voices, faces, or expression patterns of the deceased person. Third, Indonesian inheritance law does not specifically regulate how digital accounts, conversation archives, and inferential data traces must be positioned as objects that can be inherited, managed, or restricted in use. Fourth, there is no affirmative obligation for digital platforms to provide a digital legacy planning

mechanism, the appointment of digital data implementers, or the option of deleting data after death. These four issues show that the existing legal framework is not fully responsive to the legal risks arising from the use of posthumous personal data in the era of digital eternity.

3.4 Bridge with digital inheritance law and post-mortem privacy

The findings of this study also show that the problem of posthumous personal data cannot be solved through a framework of privacy and consent alone. In the latest literature, post-mortem privacy and digital legacy always intersect with inheritance law, because after a person dies, data, accounts, communication archives, photos, videos, and other digital artifacts are often treated as emotional objects, digital assets, and sources of economic value. Recent legal studies show that users want clarity on who can access and manage "digital remains", while the absence of strict rules encourages informal practices that risk the privacy and dignity of the deceased. Therefore, if Indonesian law is to build effective protection, then posthumous personal data needs to be placed in a clearer relationship with the concept of digital heritage. This approach does not mean equating all personal data with ordinary inheritances, but rather emphasizes that some data has a dual dimension, as an expression of personality and at the same time as an object that needs management arrangements after death (Harbinja *et al.*, 2024; Harbinja *et al.*, 2026).

3.5 Legal implications of interactive virtual representations

Compared to one-way digital memorialization, two-way digital revival poses a higher legal risk. Interactive virtual representations not only redisplay past data, but also generate new expressions that can be perceived as a continuation of the deceased's identity. Therefore, the legal issues are not limited to privacy violations, but also include defamation, misrepresentation of identity, emotional manipulation of the family, and commercial exploitation. The study of ghostbots places this issue at the intersection of personal data protection, privacy rights, property law, platform contracts, and the public interest. In the Indonesian context, the absence of explicit regulation opens up space for platform operators or third parties to take advantage of the deceased's data based on vague consent, general terms of service, or family access that does not necessarily represent the deceased's wishes authentically. Therefore, the distinction between digital memorialization and interactive digital revival needs to be firmly maintained in the construction of the law so that the protection provided is proportional to the level of risk it poses (Harbinja *et al.*, 2023; Hollanek & Nowaczyk-Basińska, 2024).

3.6 The Relevance and Limitations of Neural Rights as Normative Inspiration

From a comparative perspective, the study of neurorights has normative relevance because it offers a framework for the protection of mental privacy, personal identity, cognitive integrity, and freedom from algorithmic manipulation in the midst of neurotechnological developments. However, the direct application of neural rights to Indonesia faces limitations. First, neural rights were born primarily out of concerns over neurodata and brain-computer interfaces, whereas today's digital eternity is more often constructed from ordinary digital remains such as message archives, audio, and images. Second, Chile's own experience shows that constitutional innovation does not automatically solve implementation problems and can raise new questions about the scope, justiciability, and relationship with existing rights (McCay, 2024). Third, Brown (2024) reminds that threats to mental privacy do not exclusively come from neurotechnology, digital mind reading through platform data inference is also equally relevant.

Chile is often positioned as a pioneering jurisdiction because it has integrated protections for brain activity and neural data into its constitutional framework, while Colorado in 2024 expands the scope of sensitive data in its privacy law to include biological and neural data. Nonetheless, the cutting-edge literature confirms that neurorights were originally formulated to respond to the risks arising from neurotechnology and mind-reading practices, so its application in the context of digital eternity requires conceptual caution. In this study, the relevance of neural rights does not lie in the identity of the regulated data object, but in the normative values it contains, especially those related to mental privacy, personal identity, free will, and protection from algorithmic manipulation. These values become significant when artificial intelligence is used to form a virtual representation of someone who has passed away. Nevertheless, neurorights cannot be positioned as a transplantative solution that can be adopted in its entirety, given that digital footprints, social media, personal messages, and communication archives are not synonymous with



neurodata. Therefore, neural rights are more appropriately placed as a source of normative inspiration for Indonesian legal reform than as a single basis for regulation (Brown, 2024; Cornejo-Plaza *et al.*, 2024; Guzmán, 2022). Thus, comparative analysis shows that the development of posthumous personal data protection in Indonesia is more appropriately directed at strengthening the national legal framework through sectoral legislative and regulatory reforms, by making neural rights a normative inspiration that is considered selectively and contextually.

If connected within the Indonesian legal framework, the integration of neural rights values is more realistically carried out through legal reform and progressive constitutional interpretation, rather than through the transplantation of the concept in its entirety. The basis can be drawn from Article 28G paragraph (1) of the 1945 Constitution of the Republic of Indonesia concerning personal self-protection and dignity, plus the strengthening of legislation in the PDP Law to explicitly regulate posthumous personal data. With this approach, Indonesia does not need to immediately adopt the category of "new rights" in the formal sense, but can develop a protection regime that affirms: (i) the sustainability of protection of certain data after death, (ii) the mechanism for appointing digital representatives or executors, (iii) strict restrictions on the formation of interactive virtual representations without a clear basis for consent, and (iv) the prohibition of manipulative or degrading use of the deceased's data dignity. Thus, neural rights function as a normative ethical horizon that helps enrich the interpretation of Indonesian law, not replaces it (Mahkamah Konstitusi Republik Indonesia, 2025; McCay, 2024).

3.7 Normative Reform Model for Indonesia

First, the most urgent reform would be a limited amendment to the Personal Data Protection Act or, at the very least, the creation of an implementing regulation that explicitly recognizes posthumous personal data as a category that requires special regulation. The regulation needs to formulate the definition, scope, and subject who is authorized to act on data after death, either through the mechanism of appointment of digital data implementers by the data owner during life or through the hierarchy of family representation if such appointment is not available.

Second, Indonesian law needs to distinguish normatively between one-way memorialization and two-way digital revival. Memorialization can be placed in a relatively more flexible regime as long as it does not go against the will of the deceased and does not harm the nuclear family. On the other hand, the development of chatbots, avatars, interactive holograms, or other forms of AI resurrection should be subject to stricter legal standards, namely strict consent during life or very limited authorization accompanied by legal oversight. Without such restrictions, technology has the potential to produce speech, expression, or preferences that are socially associated with the deceased, when it was never his or her will.

Third, digital platforms and artificial intelligence developers need to be subject to special legal obligations. These obligations include the provision of legacy planning features, digital heir contact appointment mechanisms, memorialization options, automatic deletion options, and prohibition on the use of deceased data for model training or interactive simulations without a valid legal basis. For high-risk products, it is also necessary to implement the obligation of provenance labeling so that the public knows that the entity in question is a synthetic persona, not an authentic representation of an individual who has died.

Fourth, theoretically, this study emphasizes that digital eternity needs to be understood as an intersection between personal data protection law, digital inheritance law, human dignity protection, and human rights. Therefore, the solution offered is not enough to be understood as an expansion of the object of inheritance, but rather as the establishment of a layered protection regime that respects the will during life, family interests, and legal certainty for the platform. Within such frameworks, the notion of mental privacy in neuroscience discourse can be used to a limited extent to assert that deep inference into the mental world of the deceased requires a higher level of legal prudence.

Based on all these findings, this study confirms that the main challenge of Indonesian law is not only the absence of the term "posthumous personal data", but the absence of adequate normative constructions to bridge data protection, human dignity, consent, and digital heritage in one complete framework. Digital eternity shows that biological death is no longer synonymous with the end of the social functioning of data. Therefore, as long as Indonesian law still places data protection only in the relationship between the living subject and the data controller, the practice of forming virtual representations after death will continue to be in the gray space. This is where the

urgency of legal reform arises, not to stifle technological innovation, but rather to ensure that the use of memorial technology and post death AI remains subject to the principles of consent, respect for identity, protection of privacy, and human dignity.

4. Conclusion

This study confirms that the development of digital eternity technology has expanded the issue of personal data protection to go beyond the biological life of data subjects. Posthumous personal data cannot be viewed as information that completely loses its legal relevance after death, as it remains related to the will during life, personal dignity, family interests, and the responsibilities of digital platforms. This study shows that Indonesian law does not yet have an adequate normative basis to regulate the status, control, utilization, and restriction of the use of posthumous personal data, especially in the practice of digital memorialization and the formation of virtual representations based on artificial intelligence. Therefore, legal reform needs to be directed at the normative recognition of posthumous personal data, a firm distinction between memorialization and the resurgence of interactive digital, and the establishment of specific obligations for AI platforms and developers. Thus, the urgency of posthumous personal data protection in Indonesia lies not only in the need to provide legal certainty, but also in efforts to maintain autonomy, identity integrity, and human dignity in the post-death digital space.

Further research needs to be directed towards comparative studies between countries, empirical research on the perception of society and the family, studies on institutional design and posthumous approval mechanisms, and interdisciplinary approaches that link law, ethics, technology, and human rights. This agenda is important to support the establishment of a legal regime that is adaptive and responsive to the complexity of digital eternity in Indonesia.

References

- Aftab, S. (2024). Comparative Perspectives on the Right to Privacy. *Springer Nature Switzerland*, 109. <https://doi.org/10.1007/978-3-031-45575-9>
- Al Abiad, H., Masadeh, A. (2024). Law Comparison as a Research Method in Legal Studies, and Its Importance in Promoting Uniformity in Legal Systems. In: Al Marri, K., Mir, F.A., David, S.A., Al-Emran, M. (eds) BUI Doctoral Research Conference 2023. *Lecture Notes in Civil Engineering* Springer, Cham, 473. https://doi.org/10.1007/978-3-031-56121-4_42
- Arisanthi, K.A.W. (2025). Hak Atas Privasi dalam Pengelolaan Digital Legacy Pascakematian sebagai Wujud Perlindungan Hak Asasi. *Politika Progresif: Jurnal Hukum, Politik dan Humaniora*, 2(2), 104-113. <https://doi.org/10.62383/progres.v2i2.1672>
- Brown, C.M.L. (2024). Neurorights, Mental Privacy, and Mind Reading. *Neuroethics*, 17(2), 34. <https://doi.org/10.1007/s12152-024-09568-z>
- Byrne, W.H., Olsen, H.P. (2024). Doctrinal Legal Science: A Science of Its Own. *Canadian Journal of Law & Jurisprudence*, 37(2), 343–367. <https://doi.org/10.1017/cjlj.2024.16>
- Cornejo-Plaza, M.I., Cippitani, R., Pasquino, V. (2024). Chilean Supreme Court ruling on the protection of brain activity: neurorights, personal data protection, and neurodata. *Frontiers in Psychology*, 15, 1330439. <https://doi.org/10.3389/fpsyg.2024.1330439>
- De Witte, B. (2022). Legal Methods for the Study of EU Institutional Practice. *European Constitutional Law Review*, 18(4), 637–656. <https://doi.org/10.1017/S157401962200044X>
- Do, B., Badillo, M., Cantz, R., Spivack, J. (2024). Privacy and the Rise of “Neurorights” in Latin America. *Future of Privacy Forum*. <https://fpf.org/blog/privacy-and-the-rise-of-neurorights-in-latin-america/>
- Figuerola-Torres, M. (2024). Affection as a service: Ghostbots and the changing nature of mourning. *Computer Law & Security Review*, 52, 105943. <https://doi.org/10.1016/j.clsr.2024.105943>



- Galvão, V.F., Maciel, C., Pereira, R., Gasparini, I., Viterbo, J., Bicharra Garcia, A.C. (2021). Discussing human values in digital immortality: towards a value-oriented perspective. *Journal of the Brazilian Computer Society*, 27(1), 15. <https://doi.org/10.1186/s13173-021-00121-x>
- Guzmán, L. (2022). Chile: Pioneering the protection of neurorights. *The UNESCO Courier*, 2022(1):13-4. <https://doi.org/10.18356/22202293-2022-1-4>
- Haneman, V. (2025). The Law of Digital Resurrection. *Boston College Law Review*, 66(5), 1569–1626. <https://doi.org/10.70167/YOEQ2314>
- Harbinja, E., Edwards, L., McVey, M. (2023). Governing ghostbots. *Computer Law & Security Review*, 48, 105791. <https://doi.org/10.1016/j.clsr.2023.105791>
- Harbinja, E., McVey, M., Edwards, L. (2024). Post - mortem privacy and digital legacy - a qualitative enquiry. *Scripted*, 21, 4–39. <https://doi.org/10.2218/scrip.210024.4>
- Harbinja, E., Morse, T., Edwards, L. (2026). Digital remains and post-mortem privacy in the UK: what do users want. *International Review of Law, Computers & Technology*, 40(1), 4–27. <https://doi.org/10.1080/13600869.2025.2506164>
- Hollanek, T., Nowaczyk-Basińska, K. (2024). Griefbots, Deadbots, Postmortem Avatars: on Responsible Applications of Generative AI in the Digital Afterlife Industry. *Philosophy & Technology*, 37(2), 63. <https://doi.org/10.1007/s13347-024-00744-w>
- Indonesia, U.U.D.N.R. (1945). Undang-Undang Dasar Negara Republik Indonesia Tahun 1945 Dalam Satu Naskah. *Jdih. Bapeten. Go. Id.*
- Iwasaki, M. (2024). Digital Cloning of the Dead: Exploring the Optimal Default Rule. *Asian Journal of Law and Economics*, 15(1), 1–29. <https://doi.org/10.1515/ajle-2023-0125>
- JDIH BPK. (2016). Undang-undang No. 19 Tahun 2016 tentang Perubahan Atas Undang-Undang Nomor 11 Tahun 2008 Tentang Informasi Dan Transaksi Elektronik.
- Klasiček, D. (2023). Inheritance Law in the Twenty-First Century: New Circumstances and Challenges. In: Gstrein, O.J., Fröhlich, M., van den Berg, C., Giegerich, T. (eds) *Modernising European Legal Education (MELE). MELE 2023. European Union and its Neighbours in a Globalized World, Springer, Cham*, 10. https://doi.org/10.1007/978-3-031-40801-4_15
- Komunikasi, K., Indonesia, I. R. (2022). Undang-Undang Nomor 27 Tahun 2022 tentang Perlindungan Data Pribadi. Jakarta, Kominfo.
- Mahkamah Konstitusi Republik Indonesia. (2025). Data Pribadi Warga Wajib Dilindungi Negara Secara Maksimal. *Mahkamah Konstitusi Republik Indonesia*.
- McCay, A. (2024). Neurorights: The Chilean constitutional change. *Ai & Society*, 39(2), 797–798. <https://doi.org/10.1007/s00146-022-01396-0>
- Negara, T.A.S. (2023). Normative Legal Research in Indonesia: Its Originis and Approaches. *Audito Comparative Law Journal (ACLJ)*, 4(1), 1–9.
- Nwabueze, R.N., White, M. (2024). Privacy law and the dead—a reappraisal. *Journal of Media Law*, 468-502. <https://doi.org/10.1080/17577632.2024.2438395>
- Roberts, R.J. (2023). You're Only Mostly Dead: Protecting Your Digital Ghost from Unauthorized Resurrection. *Federal Communications Law Journal*, 75(2), 273.
- Rodríguez Reséndiz, H., Rodríguez Reséndiz, J. (2024). Digital Resurrection: Challenging the Boundary between Life and Death with Artificial Intelligence. *Philosophies*, 9(3), 71. <https://doi.org/10.3390/philosophies9030071>
- Samuel, G. (2021). Methods of legal history and comparative law. In *Comparative Methods in Law, Humanities and Social Sciences*, 11–44. <https://doi.org/10.4337/9781802201468.00007>



- Savin-Baden, M., Burden, D. (2019). Digital Immortality and Virtual Humans. *Postdigital Science and Education*, 1(1), 87–103. <https://doi.org/10.1007/s42438-018-0007-6>
- Szwajdler, P. (2023). Digital assets and inheritance law: How to create fundamental principles of digital succession system. *International Journal of Law and Information Technology*, 31(2), 144–168. <https://doi.org/10.1093/ijlit/eaad014>
- Truby, J., Brown, R. (2021). Human digital thought clones: the Holy Grail of artificial intelligence for big data. *Information & Communications Technology Law*, 30(2), 140–168. <https://doi.org/10.1080/13600834.2020.1850174>
- Turenne, S. (2023). *Reasons and Context in Comparative Law*. Cambridge University Press.
- Waite, T. (2024). How companies like Neuralink could upload human brains into cyberspace. DAZED. <https://www.dazeddigital.com/life-culture/article/60341/1/mind-uploading-key-to-eternal-life-or-terrifying-dystopia-neuralink-elon-musk>
- Zainuddin, M., Karina, A.D. (2023). Penggunaan Metode Yuridis Normatif Dalam Membuktikan Kebenaran Pada Penelitian Hukum. *Smart Law Journal*, 2(2), 114–123.

Author's Contributions

Sayid Muhammad Rifki Noval: Conceptualization, Methodology, Investigation, Formal Analysis, Writing – Original Draft. Irma Rachmawati Maruf: Supervision, Methodology, Validation, Writing – Review & Editing. Ahmad Jamaludin: Formal Analysis, Validation, Data Curation, Writing – Review & Editing. Deden Sumantry: Supervision, Validation, Writing – Review & Editing. All authors have read and agreed to the published version of the manuscript.

Does this article screen for similarity?

Yes

Conflict of Interest

The authors have no conflicts of interest to declare. There is also no financial interest to report. The author certifies that the submission is original work and is not under review at any other publication.

About the License

© The Author(s) 2026. The text of this article is open access and licensed under a Creative Commons Attribution 4.0 International Licenses.

Cite this Article

Sayid Muhammad Rifki Noval, Irma Rachmawati, Ahmad Jamaludin, Deden Sumantry, Posthumous Personal Data Protection in the Era of Digital Eternity: Assessing Indonesia's Legal Framework and the Relevance of Neural Rights, *Asian Journal of Interdisciplinary Research*, 9(3), (2026) 18-28. <https://doi.org/10.54392/ajir2632>

