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Ontological and Epistemological Perspectives on the Subject of Non-Human Legal Entities in the Digital Era

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Abstract

The escalating role of Artificial Intelligence (AI) and autonomous digital systems has transcended technological boundaries to enter the realm of fundamental legal doctrine, demanding a critical evaluation of the doctrine of legal subjects, which has long been based on a rigid anthropocentric paradigm. This study aims to establish and reconstruct the ontological and epistemological foundations for the discourse on recognizing non-human entities as legal subjects in the digital age. Using a normative legal research method combined with approaches from the philosophy of law, conceptual analysis, and doctrinal analysis, this study examines two main dimensions. From an ontological perspective, it is found that legal subject status does not absolutely depend on biological existence or innate rational consciousness (natural consciousness), but can be reconceptualized through functional agency and the expansion of the doctrine of legal fiction (fictio iuris), which has historically been applied to legal entities. From an epistemological perspective, the validation and legal recognition of non-human entities require a shift in the instruments of proof, moving from the criterion of moral free will toward the testing of algorithmic transparency, the measurability of action capacity, and the clarity of liability allocation schemes. This study concludes that ontological and epistemological recognition of electronic personhood provides a robust theoretical framework for the formation of an adaptive digital legal regime, without eliminating the position of humans as the holders of the highest ethical and moral sovereignty within the legal order.

Keywords Non-Human Legal Subjects, Legal Ontology, Legal Epistemology, Electronic Personhood, Legal Fiction, Algorithmic Accountability.

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INTRODUCTION

The rapid advancement of Artificial Intelligence (AI) and digital autonomous systems has triggered a paradigm shift that is driving fundamental transformations across all aspects of social, economic, and legal life in today's modern digital era. Over the past few decades, the existence and function of AI can no longer be simply categorized as merely passive computational instruments or mechanical tools whose movements and outputs depend entirely on real-time manual human instructions and commands. Rather, through the acceleration of artificial intelligence based on deep learning and neural networks, algorithmic entities have evolved into

autonomous agents possessing extraordinary capacity to process big data, recognize complex patterns, and make strategic decisions independently without direct intervention or supervision from human operators. These autonomous entities now not only dominate high-speed financial transactions in capital markets through algorithmic trading systems and blockchain based smart contracts, but have also expanded into the precision manufacturing sector, the creation of high value creative and intellectual works, navigation of autonomous land and air transportation systems, and even predictive decision-making in public policy and law enforcement. This massive shift in roles is gradually blurring the clear boundary between machine-based instrumental actions and will oriented actions that give rise to legal consequences, thereby creating a new empirical reality in which various decisions carrying high legal risk no longer stem directly from human subjective will, but rather from the internal computational calculations of these non-human entities.

The dynamics of operational independence exhibited by these non-human entities, on the one hand, have indeed yielded unprecedented accidental efficiencies and technological advancements in the history of civilization; yet, on the other hand, they simultaneously create a critical crisis of legal accountability when material or immaterial harm is inflicted upon third parties. In empirical practice, failures of autonomous systems, such as automated investment decisions triggering financial market collapses, diagnostic errors by artificial intelligence systems in the medical field, fatal accidents involving driverless vehicles, and mass violations of privacy rights resulting from the unregulated processing of data by autonomous algorithms give rise to a legal vacuum known as the liability gap. These losses often stem from the "black box phenomenon" and emergent behavior, in which algorithms act beyond the initial calculations and predictions of their designers due to a self-learning process that dynamically adapts to new environmental variables. This situation renders conventional legal liability doctrines whether fault based liability (schuld) or strict liability functionally ineffective. It is difficult to establish a legal causal link between any error or negligence and the programmer (developer), owner, or user (operator) of the system because the machine's actions are no longer under direct human control, ultimately leaving victims in a highly vulnerable position marked by legal uncertainty and without access to fair compensation.

The inability of conventional legal mechanisms to address this liability gap essentially stems from a profound doctrinal impasse resulting from the dominance of a rigid anthropocentric paradigm that has gripped the formation of legal theory and dogma for centuries. In classical legal traditions and systems deeply rooted in

rationalist natural law and dogmatic positivism, the status of a legal subject is an entity legally recognized as having the normative capacity to hold rights and bear legal obligations is exclusively and absolutely confined to two fundamental categories: the natural person (natuurlijke persoon) and the legal person (rechtspersoon). This highly dominant anthropocentric construct consistently posits the existence of innate biological consciousness (natural consciousness), a rational human soul, and moral free will as absolute, non-negotiable ontological prerequisites for being designated as a bearer of legal attributes. As a result of this highly closed and rigid normative interpretation, autonomous algorithm based non-human entities no matter how high their level of operational autonomy and capacity for action may be in empirical reality are automatically excluded from the qualification as legal subjects and are forced to be treated merely as passive legal objects, even though the concrete actions they produce in practice have long surpassed all the characteristics of passivity typically associated with objects.

Although the conventional legal order tends to uphold this anthropocentric positivism, the interpretation that legal subject status requires the existence of innate biological consciousness actually contradicts the historical trajectory of legal doctrine's own development, which is dynamic, transformative, and constructive. The recognition of legal entities (rechtspersoon) as independent legal subjects alongside humans is the purest historical evidence demonstrating that the legal system actually possesses the normative flexibility to engineer and give rise to new concepts of persona through the mechanism of legal fiction (fictio iuris). Legal entities such as limited liability companies, foundations, or state-owned enterprises, by their very nature, do not possess a biological body, bodily organs, a brain structure, or innate rational consciousness, as natural human beings do; nevertheless, to meet the needs of certainty in economic interactions, the allocation of business risks, and the raising of capital during the Industrial Revolution, the law deliberately abstracted these collective entities and treated them as if they were persons (personified entities). The historical logic behind this legal fiction provides a dogmatic affirmation that the designation of legal subject status is not an absolute natural reality given by nature, but rather a product of normative legal engineering created by the legal system to serve the functional needs and practical benefits of society. Therefore, the discourse on constructing non-human entities based on artificial intelligence as holders of a new legal subject status in the form of electronic personhood is not a mystical concept foreign to legal philosophy, but rather a

rational continuation and logical evolution of the shifting functional needs of the law amid the uncertainties of the digital age.

Nevertheless, efforts to transform autonomous algorithm based non-human entities into holders of electronic personhood status cannot rely solely on utilitarian justifications or purely economic practical considerations; rather, they demand a profound philosophical reconceptualization of the two main pillars of legal philosophy: legal ontology and epistemology. From an ontological perspective, the law calls for a deconstruction of the very nature of legal subjects' existence through a shift in the basis of legitimacy, moving away from the requirement of natural biological consciousness toward the recognition of functional agency, whereby an entity is deemed worthy of legal personhood based on its capacity for action, decision-making autonomy, and the tangible impact of its actions within the socio-legal reality. Meanwhile, from the epistemological dimension, the legal system faces the demand to formulate entirely new methods of testing, validation, and the attribution of accountability. Since digital entities lack a psychological inner life or human-like mental intent (mens rea), legal epistemology must shift the focus of its evidentiary instruments from an assessment of abstract moral free will toward an objective examination of algorithmic transparency, the measurability of action capacity, and the clarity of the liability allocation framework, which can be realized through a scheme involving the establishment of an integrated digital guarantee fund or mandatory insurance for autonomous entities.

Based on the comprehensive background, the complexity of the doctrinal issues, and the philosophical urgency outlined above, this study focuses its entire academic analysis on two main research questions that have been formulated systematically and are closely interrelated. The first research question examines: how can an ontological reconstruction of the designation of non-human entities as legal subjects in the digital age be achieved, particularly by reconceptualizing the requirements of functional agency and expanding the scope of the doctrine of legal fiction (fictio iuris) to transcend the rigid anthropocentric paradigm? This research question aims to deconstruct and reorganize the ontological foundations of legal subjects in order to provide dogmatic validity for the existence of digital entities within the normative order in a coherent and rational manner. Furthermore, the second research question examines: How can an epistemological shift in testing, validating, and determining the accountability of non-human entities within the legal order, particularly by transforming traditional criteria of proof based on moral free will into instruments of algorithmic transparency, the measurability of agency, and a

clear, equitable liability allocation framework be achieved? This second research question aims to map out the conditions of knowledge and rational evidentiary criteria required by the law to attribute and verify the legal consequences of autonomous machine actions in a transparent, fair, and measurable manner.

In line with the research questions outlined above, the primary and fundamental objective of this study is to analyze, deconstruct, and formulate a solid, rational, and adaptive ontological and epistemological foundation for the discourse on establishing non-human entities as new legal subjects in the form of electronic personhood. Through a legal philosophical approach, a conceptual approach, and doctrinal analysis, this study aims to make significant theoretical, prescriptive, and methodological contributions to the development of modern legal science in response to the acceleration of artificial intelligence technology, while also serving as a doctrinal reference for the formation of a future digital legal regime that is not only capable of closing the legal liability gap (liability gap) and provide legal certainty and compensatory justice for society, but also consistently upholds and enforces the position of humans as the ultimate ethical, moral, and political sovereign within the hierarchy of the legal order as a whole.

METHODS

This study is designed as normative legal research focused on analyzing legal principles, legal systematics, and the degree of philosophical-doctrinal synchronization regarding the discourse on recognizing non-human entities as legal subjects in the digital age. To holistically examine these normative issues, this study combines three main approaches. First, the legal philosophy approach is used to explore the ontological foundations of existence as well as the epistemological requirements for knowledge and proof regarding the concept of a legal subject. Second, the conceptual approach is applied to critique and reconstruct key concepts such as personhood, fictio iuris, and functional agency. Third, doctrinal analysis is utilized to map conventional legal liability doctrines and the shifts in their meanings amid the rapid advancement of artificial intelligence (AI) technology.

To support the depth of this philosophical and doctrinal analysis, the research data sources are classified into three types of complementary legal materials. Primary legal materials include normative instruments and general legal principles, such as the European Parliament Resolution of February 16, 2017 (2015/2103(INL)) on civil law rules regarding robotics, the EU Artificial Intelligence Act (Regulation EU 2024/1689), as well as the Indonesian Civil Code (KUHPerdata/BW), particularly regarding the doctrines of legal personhood (rechtspersoon) and tort (Articles 1365

and 1367). Secondary legal materials are drawn from classical and contemporary legal philosophy literature, including the ideas of Lawrence B. Solum (Legal Personhood for Artificial Intelligences), Gunther Teubner (functional agency), Gabriel Hallevy (When Robots Kill), Simon Chesterman, Friedrich Karl von Savigny's doctrine of legal fiction (fictietheorie), and Hans Kelsen's theory of pure law, which are integrated with reputable scholarly articles from international journals.

All the compiled legal materials were processed and analyzed using a qualitative-prescriptive analytical technique combined with deductive reasoning. This prescriptive approach aims to produce normative prescriptions or recommendations (de lege ferenda) regarding the future legal status of non-human entities, rather than merely evaluating the current state of positive law (de lege lata). Through a process of deductive syllogism that combines the major premise consisting of the principles and doctrines of legal philosophy, with the minor premise comprising the operational phenomena of AI and existing regulatory instruments. This study formulates a systematic, logical, and coherent legal argument to provide a theoretical framework for the recognition of electronic personhood and the allocation of fair accountability within the digital legal order.

FINDINGS AND DISCUSSION

Ontological Review: Reconceptualization of Legal Subjects and Expansion of the Fictio Iuris Doctrine

Ontologically, the fundamental discourse on the establishment of non-human entities based on Artificial Intelligence (AI) as legal subjects originates from a philosophical question regarding the nature of a persona's existence within the normative order: Does the status of a legal subject inherently require biological existence and natural consciousness? For centuries, conventional legal doctrine has been trapped in a rigid anthropocentric paradigm that equates legal personhood absolutely with the conditions of human organic life. This traditional view posits that only entities possessing biological life, sensation, and natural psychological consciousness are entitled to and capable of being granted the status of holders of rights and bearers of legal obligations. However, as modern autonomous digital systems begin to execute complex actions with legal consequences, such as conducting automated financial transactions in capital markets, managing digital asset portfolios, and operating high risk autonomous vehicles, these biological requirements have become theoretical barriers that isolate legal reality from the evolving times. Therefore, an ontological review has become an urgent necessity to reconceptualize the boundaries of legal personhood so that the normative order can provide a rational, comprehensive, and adaptive response to the presence of non-human autonomous agents in the digital age.

The first step in overcoming these dogmatic limitations is taken through the deconstruction of legal anthropocentrism. The history of legal philosophy clearly demonstrates that the status of a legal subject is fundamentally not an absolute natural reality or something given by nature, but rather a purely normative construct created and established by the legal system itself. The designation of a human being as a natural legal subject (natuurlijke persoon) does not occur automatically merely due to the existence of biological cells or physical organs, but rather because the legal system deliberately attributes normative rights and legal obligations to that individual. As explained in Hans Kelsen's Pure Theory of Law, a legal subject is, in essence, merely a normative tethering point (normative unity) upon which a series of rights and obligations are anchored based on a legal norm. By severing the absolute link between legal personality and innate biological aspects, the legal system gains the doctrinal flexibility to attribute legal status to any entity including digital entities deemed necessary to uphold legal certainty, social order, and the protection of public rights.

The theoretical foundation for attributing legal status to these non-biological entities has a very strong historical precedent through the expansion of the doctrine of legal fiction (fictio iuris). The most relevant and valid historical analogy can be found in the recognition of legal entities (rechtspersoon), such as limited liability companies, foundations, or state-owned enterprises as independent legal subjects distinct from their founders within the civil legal system. A limited liability company, by its very nature, lacks a biological body, bodily organ structure, an innate rational soul, or natural consciousness, just as a human being does; however, to meet the practical needs of business risk allocation, capital accumulation, and certainty in economic transactions during the era of industrialization, the law deliberately created a normative fiction (fictio iuris) to treat such artificial collective entities as if they were persons (personified entities). By applying a similar dogmatic line of reasoning, non-human entities based on autonomous AI systems can be reconceptualized through the establishment of a new legal fiction known as electronic personhood. This doctrine of legal fiction bridges the gap between the absence of a physical-organic form and the urgent normative need to integrate autonomous digital agents into a well-ordered legal framework.

To fortify this ontological framework against accusations of merely imposing a fiction, the paradigm for determining digital legal subjects must shift from essentialist organic criteria toward the concept of functional agency. Within the framework of contemporary legal philosophy, the ontology of digital legal subjects is no longer grounded in fundamental essentialist questions about what the entity is biologically (what it is), but is instead objectively focused on what the entity can do within the socio-legal reality (what it does). When an autonomous system based on artificial intelligence has demonstrated the capacity for functional agency, the ability to analyze empirical data, make strategic decisions independently without direct human intervention, and perform external actions that give rise to legal consequences

for third parties. Then, ontologically, that entity has met the functional requirements to be recognized as existing within the normative realm. This functional agency fundamentally separates the criteria for legal capacity from the requirement to possess a subjective and internal psychological moral consciousness.

A direct implication of this ontological reconstruction based on the expansion of the doctrine of legal fiction and functional agency is the opening of a dogmatic space within the legal system to attribute limited legal capacity to non-human entities through the qualification of electronic personhood. This recognition is by no means intended to equate the dignity, worth, or fundamental rights of digital agents with those of natural persons in an absolute sense, but merely to grant a measured and functional legal personality status commensurate with the operational domain in which they function. By establishing electronic personhood as a legal subject with limited capacity, the digital legal system gains a solid ontological foundation for imposing normative obligations, mandating the maintenance of a separate trust fund for compensation mechanisms, and determining the allocation of liability for losses caused by the operation of autonomous algorithms. This ontological reconstruction effectively addresses the legal vacuum caused by the limitations of a rigid anthropocentric paradigm, without in any way eliminating or diminishing the position of humans as the holders of the highest ethical, moral, and legal sovereignty within legal civilization.

Epistemological Review: The Shift in Evidence and Algorithmic Accountability

From the epistemological dimension of the philosophy of law, the shifting discourse on recognizing non-human entities based on Artificial Intelligence (AI) as legal subjects raises fundamental questions centered on the methodology of legal knowledge: how can the law ascertain, examine, validate, and measure the existence of the will and actions of digital entities in order to establish a fair framework of accountability? In the conventional legal tradition, characterized by rationalism and anthropocentrism, the determination of fault and legal liability rests entirely on the law's ability to ascertain the subjective psychological state of a legal subject. Classical criminal and civil law doctrines consistently require the presence of criminal intent (mens rea), moral free will, or a mental state of negligence (culpa) as the primary basis for legal proof of the commission of an unlawful act. However, when non-human entities such as autonomous digital systems independently execute complex actions that harm others, these traditional epistemological instruments face a critical functional paralysis and methodological impasse. This paralysis occurs because machines or artificial intelligence-based systems, by their very nature, lack a psychological inner state, emotions, a soul, or subjective moral consciousness that can be interrogated through traditional methods of proof. Therefore, legal proof in the digital age demands a fundamental transformation of the epistemological framework, shifting from a paradigm centered on tracing human subjective inner will to a paradigm of objective verification based on technological indicators and digital evidence that is measurable and normatively verifiable.

This most fundamental epistemological shift manifests itself through the reconstruction of legal evidentiary criteria, namely a shift from the criterion of "moral free will" to the testing of "measurable action capacity." In a modern legal system that adapts to the acceleration of technology, the law is no longer compelled to speculate on "what an autonomous algorithm thinks, feels, or intends" within its internal realm; rather, it shifts the focus of its empirical analysis entirely to "what the system actually executes, demonstrates, and produces" within the socio legal reality. This "action capacity" is tested and measured through a structured set of objective indicators, such as the level of operational autonomy in decision making, the complexity of data processing algorithms, the intensity of interaction with the external environment, and the direct impact of computational outputs on the legal rights of third parties. By shifting the epistemological focus toward measurable action capacity, the law no longer needs to be trapped in endless metaphysical debates regarding the existence or nonexistence of artificial consciousness in machines, but can instead precisely assess the legal implications and normative validity of a digital agent's actions based on evidence of operational behavior systematically recorded in its computational activity logs, thereby providing tangible legal certainty for every transaction and interaction in the digital world.

As a logical consequence of this shift in the criteria of proof, the process of validating and recognizing the legality of actions by non-human entities is highly dependent on the enforcement of algorithmic transparency and technological auditability. Within the epistemological framework of digital law, legal knowledge regarding the presence or absence of errors, malfunctions, or operational deviations in autonomous systems is no longer derived from the subjective assertions or sworn testimony of disputing parties, but rather through a logical audit of the program code structure, the quality of training data processing, and the normative limits of autonomy granted by the designer to the algorithm. The "black box phenomenon" where decision making processes in deep learning algorithms are often opaque and difficult for ordinary human logic to trace must be overcome through legally mandated standards of algorithmic transparency. Through this epistemological engineering, the instrument of legal proof is transformed into a sophisticated and comprehensive digital forensic process, capable of reconstructing the entire chain of technological causality to determine with certainty whether an operational failure stems from a design defect, algorithmic deviation, operational negligence, or unpredictable environmental interactions, thereby ensuring that legal decisions are grounded in solid factual evidence and scientific rationality.

The epistemological knowledge gained through the demonstration of algorithmic transparency and auditability is then translated prescriptively into a clear, structured liability allocation framework that ensures compensatory justice for the aggrieved parties. Because non-human entities with electronic personhood status possess unique functional characteristics and lack a physical body upon which to impose conventional criminal sanctions, the epistemology of legal accountability

formulates three complementary and integrated liability schemes: strict liability, vicarious liability, and the integration of mandatory digital insurance. The principle of strict liability applies when the systemic risks arising from autonomous operations can no longer be directly traced to the specific fault of any particular human. Meanwhile, vicarious liability treats digital entities as autonomous agents whose legal actions, within certain limits, are jointly attributable to the developer or operator who derives economic benefit from them. To ensure that the recognition of this legal status does not become a means of avoiding liability (moral hazard), legal epistemology requires that the recognition of electronic personhood be simultaneously tied to the ownership of separate digital assets or an independent insurance policy, so that financial losses caused by machine actions can be automatically and directly recovered without being hindered by the obstacles of conventional civil enforcement.

Ultimately, this entire epistemological shift and the formulation of this algorithmic accountability framework are by no means intended to displace humans; rather, they aim to further strengthen the position of humans as the ultimate ethical and moral sovereign within the digital legal order. The ontological and epistemological recognition of "electronic personhood" is essentially a pragmatic legal fiction created by and for the purpose of protecting human rights from the risk of a "liability gap" arising from the uncontrolled acceleration of autonomous technology. By establishing criteria for algorithmic transparency, the measurability of action capacity, and the precise allocation of liability, the legal framework consistently upholds the principle of human control at every operational stage of AI. Human ethical sovereignty remains fully reflected in the exclusive authority to set normative value standards, determine theof the operational legality of artificial intelligence, and holding the ultimate kill switch to revoke legal status, restrict rights, or digitally deactivate such non-human entities if their behavior is proven to threaten public safety, justice, social order, and the universal dignity of humanity.

Harmonization of Legal Systems: Human Ethical Sovereignty in Digital Law

The harmonization of the digital legal framework is fundamentally grounded in a profound philosophical understanding that the ontological and epistemological recognition of non-human entities based on Artificial Intelligence (AI) is by no means intended to absolutely equate the legal status of digital agents with that of natural human beings. The construction of "electronic personhood" is not a form of recognition of existential equality or a manifestation of post-human egalitarianism, which risks diminishing human dignity within the normative system. On the contrary, electronic personhood is established purely as a functional legal fiction (functional fictio iuris) that, both dogmatically and legally, is firmly positioned below humans in the hierarchy as natural legal persons (natuurlijke persoon). Just as the doctrine of the legal entity (rechtspersoon) was historically created by the legal

system to serve the interests of capital accumulation, the allocation of business risks, and the certainty of human transactions during the era of industrialization, the status of electronic personhood is designed solely as a pragmatic normative instrument to close the liability gap arising from the high degree of decision-making autonomy of modern algorithms. Therefore, the recognition of legal personality for digital entities is derivative, functional, instrumental, and limited to specific operational spheres governed by law, so that such entities are in no way endowed with fundamental rights derived from the inherent dignity of human beings, such as human rights, the right to personal freedom, protection of privacy, or the right to political sovereignty within the state framework. This subordinate status ensures that the creation of digital entities will never erode or supplant the core principles of the protection of human dignity.

Within this framework of harmonization, humans consistently maintain and uphold their unshakable central position as the holders of the highest ethical, moral, and legal sovereignty within the normative order as a whole. Although autonomous digital systems in the modern era are capable of executing highspeed computations, independently analyzing big data, and making highly complex predictive decisions in both the commercial and public service spheres, such artificial intelligence entities ontologically lack an internal conscience, emotional sensitivity, a sense of empathy, or the capacity for moral judgment, all of which are the cornerstones of lawmaking and the enforcement of universal justice. The formulation of ethical standards, the drafting of legal policies, the establishment of standards for legal certainty, and the interpretation of fundamental values of justice remain the exclusive domain of human authority and must not be transferred, represented, or delegated to any autonomous algorithm. The digital legal framework mandates the application of the "human in the loop" principle throughout the entire lifecycle of artificial intelligence development, testing, and operation. This ensures that all computational outputs and algorithmic decisions that have the potential to cause fundamental legal impacts on people's lives, subjective rights, and civil liberties remain under full, independent, and continuous human ethical oversight and subjective moral accountability, in order to prevent the emergence of a dehumanizing technocratic tyranny.

The practical and concrete manifestation of this human ethical sovereignty is fully realized in the imperative authority to establish the boundaries of rights, allocate the burden of responsibility, and even absolutely revoke the rights of non-human entities through digital deactivation mechanisms. The human legal system holds the highest normative authority to determine the conditions for granting the

status of electronic personhood, to define the scope of its legal capacity to act, and to terminate the legal existence of such autonomous agents if their actions are proven to involve algorithmic deviations that threaten public safety, social order, or human dignity. The determination of the conditions for dissolution and digital death places the existence of non-human entities entirely under the control of human lawmakers, analogous to the civil dissolution of legal entities through the revocation of operating licenses, the revocation of legal entity status, or the comprehensive liquidation of assets. Thus, ontological and epistemological reconceptualization through the recognition of electronic personhood, framed by human ethical sovereignty successfully gives rise to a digital legal regime that is highly adaptive, responsive, and anticipatory toward the acceleration of future technology, without in any way shifting or diminishing the position of humans as the pinnacle of normative sovereignty, the holders of moral sovereignty, and the ultimate purpose of the law's very existence.

CONCLUSION

Philosophically, this study concludes that, from an ontological perspective, the status of a legal subject is not, in essence, absolutely tied to biological existence or natural consciousness. Through an extension of the doctrine of legal fiction (fictio iuris) which has historically been successfully applied to legal entities (rechtspersoon) non-human entities based on Artificial Intelligence (AI) can be reconceptualized and recognized as a new type of legal subject, namely "electronic personhood," based on the criterion of functional agency. This ontological recognition simultaneously demands an epistemological shift in the instruments of proof and the determination of legal accountability. The legal order in the digital age must shift its focus from traditional criteria based on moral free will toward assessing algorithmic transparency, the measurability of action capacity, and the clarity of a rational and measurable liability allocation framework.

The synthesis of this ontological and epistemological reconstruction yields highly significant legal implications in the form of a solid theoretical foundation for the establishment of an adaptive, responsive, and solution oriented digital legal regime. This framework is designed to address the threats of legal vacuums and liability gaps caused by the rapid development of autonomous systems. Nevertheless, the recognition of electronic personhood as a functional legal fiction remains situated within a strict ethical hierarchy, ensuring that the legal order continues to uphold and affirm the position of humans as the holders of the highest ethical, moral, and legal sovereignty within the entire legal system.

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