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LEGAL PERSONALITY OF ARTIFICIAL INTELLIGENCE

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Abstract:
This paper examines the ontology of artificial intelligence (AI) within the context of contemporary society. With the rapid progression of technology, the definition of legal subjects has become increasingly ambiguous, as the technological landscape continues to evolve. The orthodox perspective fails to provide adequate solutions to this problem. An alternative approach, as put forth by Visa A.J. Kurki's bundle theory offers a potential pathway, yet AI's intrinsic nature surpasses the minimum thresholds defined by Kurki's model. The authors propose a periscopic model that explores the interaction between the material world and the virtual or augmented sphere, often referred to as the metaverse. This article contends that the current philosophical foundation of law is both outdated and insufficient, primarily due to the shift from singular to plural forms of agency. AI has transitioned from being purely instrumental or intermediary, as observed in Artificial Narrow Intelligence (ANI), to autonomous decision-making entities, exemplified by Artificial General Intelligence (AGI). Drawing on theoretical insights from Yuval Noah Harari, the paper underscores the need for a new conceptual framework to address AI's lack of a material entity. In conclusion, the paper asserts that the recognition of AI as legal subjects is an inevitable development.

Keywords:
artificial intelligence • *legal subject* • *subjective reality* • *objective reality* • *periscopic view*

Introduction

Would it be possible for Artificial Intelligence (AI), put to work to assist humans, often even completely taking over human roles to do simple things (playing chess or other games online) or complex (buying and selling shares or foreign exchange, driving and controlling land, sea or air traffic, etc.), to be held legally liable according to human-made rules and regulations? Is it rationally possible or even feasible to put artificial intelligence, personified by the human imagination, before a court of law and in the case that such AI, proven guilty beyond doubt or based on preponderance of truth, had transgressed the law, be sentenced to prison or compensate injured parties? To intelligibly respond to such a farfetched question, we must look closely, from a legal perspective, at the development of AI and compare – to the extent that is possible – AI with human beings, bearers of rights and duties under the law.

These questions and many more are triggered by the observation or more accurately the prediction, endorsed by Yuval Harari amongst others, that AI, as embedded in computers and many hardware appliances, may soon completely take over many jobs previously performed by humans.[3] Not only menial, routine work, like assembling cars, mopping floors, managing parking lots, but to be taken over are professional-intelligent jobs as well. Medical doctors, lawyers, accountants are put on the list of jobs that are said to be better trusted to AI.[4] The argument is that AI, not prone to human errors due to tiredness, boredom or dislike of customers, may offer better and constant professional services. AI may even compete with humans in the field of creative artistic work and may produce better academic papers than students who struggle with reading and writing. ChatGPT 4o, for instance, with a little nudge from the user, may in the end not just assist, but completely replace students as authors of scientific papers.

However, it is also conceivable that AI is used as a tool, means or medium to commit crimes in the real world or in cyberspace. Even worse, given the widely recognized ability of AI, in whatever forms, to learn and independently make decisions, AI too may learn to cheat (when used

to play human games) or 'knowingly' and 'deliberately' transgresses the boundaries of human law by doing or not doing something.[5] Consequently, AI may be perceived as having the ability to commit crimes and considered to be perpetrator or at least aiding or abetting a crime. The ability of AI for continuous learning and independent decision has been proven at least by Deep Blue who successfully competed against the best human chess player[6]. This example may not be sufficiently convincing. Nevertheless, imagine that AI, created and operated as brokers at various stock exchange markets, might one day decide not to enrich human beings but itself, or autonomously choose to crash the global economy.[7] The dystopian world of the *Terminator* film series depicts AI-robots running amok and taking over the world. While luckily, this worst scene scenario, is entirely the product of imagination, it might someday become reality.[8]

The legal issue of whether artificial intelligence–in various forms–can be compared and equated with humans (personified) and be held legally accountable has probably not yet become a real issue. Cyber law and cybercrime studies persist in focusing on humans only. Before the law, only humans and fictitious legal bodies were treated as subjects. This article will discuss the ontological extent to which AI may be treated as legal subjects and held accountable for their doing. A brief exposure will be given on the definition of legal subject and legal personality and whether it is possible and reasonable for artificial intelligence to be equated – in one way or another – as legal entities on par with humans or corporations. The subsequent discussion focuses on the periscopic perspective of the metaverse, posited as the next logical progression in the recognition of AI legal personhood. The last part will offer a reflection on the extent to which contemporary legal systems – created and operated by humans to regulate human behaviour – may be used to regulate and control artificial intelligence and the extended-augmented or virtual world created.

The Concept of Legal Subject and Legal Personality

Human beings, generally assumed to possess free will and in addition a conscience, are expected to be able to use their freedom in a responsible manner.[9] They should be able to be held accountable for their action or inaction and in the case their behaviour results in harm or injury to

others be held legally liable. Responsibility, accountability and liability are interrelated concepts, but with different nuances of meaning. Though in everyday language, considered interchangeable, in legal theory and practice, they may refer and be used in different contexts.

Free will and conscience are typically regarded as qualities that enable individuals to exercise their freedom in a responsible manner. [10] When this freedom results in harm or injury to others, individuals are expected to be held accountable for their actions or inactions. In legal theory and practice, the concepts of responsibility, accountability, and liability, while sometimes used interchangeably, possess distinct meanings. These notions are closely tied to the idea of legal personhood, which entails holding both rights and duties. Legal personality is granted through the assignment of rights and obligations, meaning that accountability is not merely a moral expectation but also a legal requirement. Society's ability to enforce these rights and duties through predictable mechanisms is what defines legal personhood. This capacity to engage in legal relations, whether applied to natural persons or inanimate entities, serves as the foundation of legal personhood, though ongoing debates persist over its exact nature and scope.

To be recognized as a legal person is to hold rights and duties. Conferring legal rights or imposing legal duties, therefore, entails granting legal personality. If society, through effective sanctions and its agents, compels A to act or refrain from acting in favour of B, then B holds a right and A bears a duty. Thus, the predictability of societal actions defines rights and duties, and these, in turn, define legal personality. Despite ongoing debates regarding the "essential nature" of legal personality, there is a general consensus that the existence of legal rights and duties is the test of legal personality in any given subject, whether a natural person or an inanimate object. One common definition suggests that legal personality is the capacity to engage in legal relations. However, there is some contention regarding the term 'capacity,' as it implies the potential for legal relations without the subject having yet entered into them.[11]

Being able to be held accountable and/or liable is somehow related to the view of human beings as rational, calculating being, always a priori or a posteriori contemplating the [economic] cost and benefit of their action-inaction, and as moral beings, having conscience, able to differentiate

good-bad. That is having the ability and willingness to seriously consider the moral value of their actions. Being rational and moral is accepted and recognized as the essence of being human. However, the same criteria of being rational and moral is used to differentiate between those who have fully attained and those who are not yet fully human. Here we touch upon the concept of adulthood and maturity, important in determining legal personhood and legal accountability. Only adults, fully considered autonomous human beings, may act in a responsible and accountable manner.

AI is rapidly advancing toward a point where it may match or surpass human cognitive abilities, applying reason, judgment, and situational awareness to solve complex problems. This evolution raises profound legal and ethical questions about how we will relate to a form of intelligence that cannot easily be considered subordinate in a cognitive hierarchy. The evolving understanding of personhood, already extended to fictional entities like corporations, will face unprecedented challenges. This issue goes beyond whether AI will achieve 'sentience' in a way that resembles human consciousness; rather, it touches on more nuanced questions about how we perceive and treat highly capable AI that demonstrates cognitive abilities equal to or exceeding our own, along with a degree of self- and situational-awareness that may not mirror human experiences of sentience.

When a critical mass of society can no longer deny the arrival of sentient AI, we will encounter numerous ethical dilemmas. Chief among these will be determining how to interact with AI ethically, what rights—if any—it should be granted, and how we navigate these questions in a world where opinions are likely to diverge sharply. While some may persist in the belief that sentience is a uniquely human trait, others may recognize advanced AI as being aware of its place in the world and its relationships with humans. Such AI, potentially smarter than humans, might even recognize variations in its treatment that resemble emotional responses. Although we cannot yet fully comprehend what sentient AI will become, it may ultimately deserve ethical considerations that, until now, have largely been reserved for humans.[12]

All this correlates with another important concept of personhood, legal subjects, defined briefly as bearers of legal rights and duties. Recognition of legal personhood is in legal practice extended to man-made imaginary

creations, i.e. corporations (public: state, government, government agencies or private-economic enterprises). It is those legal subjects that are in the perspective of law, able to act responsible-irresponsible, held accountable and, if necessary, be prosecuted before the law for their action-inaction causing harm to other parties (held legally liable).

Acting outside the limits of the law, neglecting legal duties, abuse of rights (powers-authorities) is defined as transgression, violation, or breaking of the law. Society or the state-government respond to such transgression with rules and procedures enabling victims (those suffering injury from the breaking of law) to demand compensation (restitution, satisfaction, rehabilitation) or punishment (condemnation and penalization).

As indicated earlier, the scope and meaning of legal personhood (personality) correlates with adulthood, (physical, emotional, psychological) maturity, in short, characteristics of a person considered fully human. In ancient times, only man of a certain age and statute were considered fully human and thus considered bearers of legal duties and rights. Slaves, children and women were not considered fully human, but property, owned by free-adult-mature man, and consequently not fully capable of bearing legal rights and duties. Such views may still be traced underscoring the rules found in the (old) private law, in which wives cannot perform any legal act unless accompanied by their husbands or in the once widespread rule that women have no voting rights. This perspective also coloured the legal rule that parents are to be held responsible and accountable for their children's behaviour.

In modern times, slavery and serfdom, the dehumanizing of fellow men (including women and children), are considered uncivilized and thus illegal. Human beings should never be regarded as property. Influential is the human rights movement, the realization that every human being by nature, bears inalienable (human) rights which the state and society should recognize, honour, protect and implement. Given the wrongful idea that the corollary of basic human rights are basic duties, here a cautionary note is appropriate. Such basic duties imposed upon citizens are to be discussed in a different context, i.e. rule of law, democracy and civil society. A second note is that, notwithstanding the view that children also possess basic (special human) rights, they, granted considered not yet fully human, in the event they break the law, should enjoy different softer treatment.

Also in modern times, the scope and definition of legal subjects are extended to include fictitious-imaginary beings, i.e. commercial and public law enterprises (nation state, government, bureaucracy etc.). Those imaginary beings before the law are considered real in the sense that they can act autonomously or independently, separate from human beings who create and operate them in the first place. Those enterprises, bearers of legal rights and duties, are expected to act responsible, accountable and be held legally liable should their behaviour transgresses the law. How can this way of thinking be adapted to deal with the problems occurring in cyberspace, the realm where artificial intelligence also operates?

In his book *A Theory of Legal Personhood*, Visa Kurki sets out to demonstrate that the traditional Western view, which he calls the Orthodox view, regarding both (i) who or what can be a legal person and (ii) what legal personhood entails, is flawed because it has not kept the pace with advances in legal theory relative to rights' theories and because it has no clear criteria or conceptual underpinnings that allow for concluding consistently, one way or the other, that a given entity can or cannot be regarded as a legal person. As an alternative to the Orthodox view, Kurki proposes what he calls the bundle theory of legal personhood, in which legal personhood is understood as a cluster property that consists of a bundle of active and passive 'incidents' that occur to certain entities. Such 'incidents' are discrete legal rights, responsibilities, and competencies held by legal persons.[13]

Kurki's theory diverges from the Orthodox view because it provides criteria from which to establish who can be regarded as a legal person, based on the kinds of incidents with which an entity can be reasonably endowed. Perhaps more importantly, it also breaks down personhood into (interconnected) parts, concluding that being a "legal person" means falling on a spectrum ranging from full to borderline personhood, depending on the kinds of incidents endowed to a specific personal entity. On the one hand, this means that Kurki's theoretical framework enables the establishment of firmer outer boundaries to the extension of legal personhood. On the other hand, it allows for better tailoring in terms of what kind of legal person a given entity might be.

In a strict sense, Kurki states that to be a person, it is not enough to be the holder of rights and duties. It is necessary to have more than

a mere legal platform or a mere bundle of legal positions. To be a legal person, there must be a series of legally relevant events *coupled to this particular entity*. However, this requirement will only make sense if this entity has *interests to be protected*. These incidents, even passive incidents (fundamental protections, bodily integrity, and protection of life and liberty), cannot be coupled to any entity (rivers, idols, or rocks). They will only make sense if the entity has, *at a minimum, sentience*.[14]

Kurki follows, in this case, Korsgaard's understanding of which sentient beings have a self, in that their dispositions can be observed from their behaviour. They have preferences and desires, albeit elementary: to be well cared for, to have clean food and water, etc. In other words, they experience the world. In short, they show their will, which also includes, according to Hacker, "intentions, motives and purposes". Adverse reactions, such as not feeling pain can also be included. Sentient beings are serious candidates for being legal persons.

The application of the bundle theory of legal personhood to artificial intelligences (AIs) presents significant challenges. The theory fails to adequately address the unique complexities of AI, as it was not designed with *intelligent non-human entities* in mind. Rather than resolving the debate over whether AIs should be granted legal personhood, the theory merely provides a structural framework for the discussion without offering substantive solutions. This highlights significant issues faced by proponents of the orthodox view of legal personhood, particularly in grappling with the legal and ethical implications that AI development brings. Given the rapid advancement of AI technology, these unresolved questions have become increasingly pressing and demand immediate scholarly attention.

For instance, Google's AI defeated the world's best human players in the complex game of Go, a milestone that was previously believed to be decades away. Legal and political actors are beginning to respond to such advancements. In 2013, the United Nations General Assembly commissioned a report on lethal autonomous robots, and investment banks have already implemented robot traders. These developments prompted the European Parliament's Committee on Legal Affairs to emphasize, in a 2017 report, the need to address civil liability for damage caused by robots at the Union level.

The legal personhood of AI is multifaceted, and the cluster-property approach to understanding legal personhood is well suited to analysing this issue. We propose three key contexts that are relevant to AI legal personhood. While these may overlap, they can be distinguished for the sake of clarity. The three–ultimate-value, responsibility, and commercial–serve as the organizational structure for AI personhood.

In the ultimate-value context, the question centres around whether AIs possess inherent value, and if so, whether they should receive legal protections similar to those given to human children. Science fiction often presents robots with features that prompt questions about their ethical treatment. In this context, fundamental legal protections come to the forefront, alongside many other incidents of legal personhood. These protections raise significant questions about the moral status of AI and whether its legal personhood is justified based on its perceived value.

In the responsibility context, the focus shifts to the legal responsibility of AIs. This includes whether autonomous entities like self-driving cars or security robots can be held criminally or civilly liable for their actions. For AI to bear legal responsibility, it would also need to hold property, as tort liability requires the capacity to own property.

Finally, in the commercial context, the argument centres on AI's ability to function as commercial actors, engaging in buying, selling, and other commercial activities. This context involves key incidents of legal personhood, such as special rights, ownership, and legal competences, and how they might apply to AIs in the commercial sphere.[15]

Legal persons have traditionally been understood as entities with legal rights and/or duties. This traditional concept of legal personhood has been increasingly challenged over recent decades. In legal practice, this shift has been driven by the global development of law, where entities previously considered legal non-persons – such as non-human natural entities, non-human animals, foetuses, and artificial intelligences – have been ascribed or proposed to be ascribed legal rights and/or status as legal persons.[16]

In legal theory, this transformation has been reflected, inter alia, in Kurki's bundle theory of legal personhood, which offers an alternative to the orthodox view. However, Kurki's approach is still unable to provide a satisfactory answer to the problem of AI's legal personhood. From the

three contexts, the principle of minimum sentience cannot cope with the second and the third. Therefore, hypothetically there is still a room of debate for another argument of personhood.

As we move from discussing the legal responsibilities of AIs to exploring a new type of personhood, it becomes essential to examine how these responsibilities evolve in increasingly complex environments, both physical and virtual. The legal personhood of AIs within the material world—such as in commerce or autonomous operations – follows established norms. However, when AIs operate in virtual or augmented spaces, or the 'metaverse',[17] these traditional frameworks become strained. In these contexts, we witness a fragmentation of roles and responsibilities, where the interaction between the real and virtual worlds demands a more fluid and adaptive understanding of personhood. Just as individuals are constrained by their environment and legal structures, AIs in virtual environments face similar limitations, although in a realm where conventional legal frameworks may no longer be fully applicable.

A New Type of Personhood: The Periscopic View

Viewing the transition from the real world to the virtual and augmented realms is akin to adopting a "periscopic point of view" from within an existential 'submarine.' Both worlds present distinct limitations. While the individual remains confined inside the submarine, their gaze traverses the surface of a world that remains inaccessible. The contrast between the two environments is striking; the constrained interior of the submarine versus the expansive world above. However, there is no firm standpoint for the observer to anchor their position, resulting in a state of complete ambiguity. The internal world of the submarine feels small and enclosed, while the external world appears vast and boundless.

Living beneath the "ocean of consciousness"[18] imposes constraints on one's view, and from this limitation arises a drive to become a seeing being. However, the tools available for observation are as constrained as the individual's current state of personhood. In essence, both the submerged and surface worlds complement one another. Thus, a person is always fragmented, not because she or he cannot fulfil the needs, but the wants. The other end of the periscope amplifies the wants beyond what a person

can do to satisfy the need, what the person really needs to survive his or her biological demands.

This, however, is not something new as the perspective used is anthropocentric. When humans are at the spotlight of any rational attempts to comprehend the universe(s), the non-symmetrical relation between biological limitations of 'needs' – which are spatiotemporal – and 'wants' as the exact opposite is problematic. Kurki's bundle theory is anthropocentric. To measure everything based on human standard (the Protagorean dictum of *panton chrematon metron anthropos*) means to tailor everything to the corporeal limitation of the current hominin. Thus, the bundle theory as a revision to the orthodox view of personhood is still in the same ontological domain. The paradigm in human-centred approach is regressive, as it can be seen in the orthodox view and bundle theory.

Before the arrival of the metaversal world, severe spatiotemporal limitations in the 'submarine' rendered human needs and wants mostly biological. The personhood of a person is also based on his or her incorporeal existence. The world is *necessarily* real. There are 'dreams', however, dreams are taken for granted. These dreams are unreachable and distant. A dream is always surreal. The *virtual* and *augmented* reality breaks the barrier. *What is dreamt then becomes what is real.*

The boundary between *the real* and *the surreal* or *unreal* becomes blurred. This complexity renders the notion of "a person" far from simple. Since the dawn of Plato's dualism, philosophy has grappled with the nature of the dream world and its relation to reality. However, as philosophical inquiry progressed, particularly closer to the twentieth century, reality increasingly became understood in more physical terms. Even ideas, once thought of as purely abstract, are now conceived as neuronal processes—material, yet no less real within the bounds of physical limitation. This shift underscores the tangible nature of thoughts, blurring the line between the mental and the material.

The situation shifts dramatically when "the observer in the submarine" uses the periscope. Previously, personhood was firmly grounded on a tangible, "fathomable ground," with ideas serving to anchor this grounding. According to the orthodox view, one is not truly a person until recognized as such by others, with personhood being validated by the fundamental need to remain biologically alive. Limiting this biological

dependence could be seen as a form of penance, reinforcing the centrality of physical survival. In the metaversal world, however, the notion of biological grounding becomes secondary, as the significance of physical existence diminishes in favour of virtual presence and interaction.

To be a person *is* to be connected to the world of the virtual and the augmented. Biological grounding becomes digital and further, quantum. *Cellular existence becomes the existence of non-biological electric impulses*. In other words, to be a person is to be completely off the ground. The problem is that the transition is never crystal clear. The idea of a real person stays as a biological idea, and all the consequences of the idea lingers. Being a person means biological comfort, and to harm a person is to take the comfort away.

In this new reality, the concept of harm itself undergoes a radical transformation. When personhood extends beyond the physical into the virtual, what constitutes harm becomes more complex and multifaceted. Emotional and psychological states, once tied closely to the physical body, now find themselves interwoven with digital identities and experiences. The loss of digital assets, i.e., the destruction of a virtual identity, or the breach of privacy in the metaverse can evoke a sense of violation as profound as physical harm.

Nevertheless, the legal and philosophical frameworks that govern the understanding of personhood and harm are still rooted in a world where the body is the primary locus of existence. As we navigate this shift, society must grapple with how to protect individuals whose personhood is no longer confined to the flesh but extends into, or even fully replaced by, the expansive and ever-changing realms of the virtual. This redefinition of personhood challenges humans to reconsider not only what it means to be harmed but also what it means to be a "whole person".

This protection is only possible when *the other end* of the periscopic world is well defined, in which barely is available. This is the most pressing issue is the unmapped nature of the metaversal (or in Spinozist dictum of *natura naturata*); in that it is necessary to provide the conceptual framework before any propositional infrastructure can be established.

If the brick and mortar of the physical world are governed by the laws of gravity, the metaversal world is ruled by the laws of quantum

mechanics. The electromagnetic bridges as a macrosystem are managed by artificial intelligence. As the strength of the computing system grows, the power of AI also grows exponentially. The most significant turning point is when AI has reached the level of Artificial General Intelligence or AGI.

When AI reaches AGI, it not only processes information but begins to understand, reason, and make decisions in ways that mirror human cognition. This evolution forces a re-evaluation of the periscopic view between the physical and virtual worlds. The rise of AGI blurs the boundaries between tool and entity, challenging the notion of AI as merely an extension of human will. Instead, AGI becomes a participant in the metaversal world, potentially with its own form of agency and influence over digital environments.[19]

This shift brings about profound philosophical questions: If AGI can act autonomously, should it be considered a legal subject with rights and responsibilities? The conventional framework that limits personhood to biological beings becomes inadequate in addressing the complexities introduced by AGI. The integration of AGI into the metaversal world compels humans to rethink the very foundation of what it means to be a person, and whether personhood must be grounded in biological existence or can be extended to non-biological entities capable of independent thought and action.

As these virtual entities gain prominence, the periscopic view expands beyond the mere interaction between human users and their digital counterparts. The relationship now involves multiple layers of interaction—between humans, AGI, and the overarching virtual ecosystem as the locus of its existence. The challenge lies in constructing a coherent legal and ethical framework that can cope with these new dynamics while ensuring that the rights and protections afforded to human personhood are not undermined by the emergence of *non-human agents* in the metaverse. The delicate balance between recognizing (i) the autonomy of AGI and (ii) maintaining the primacy of human dignity and rights will define the next stage of this evolving discourse.

At this point, "a person becomes persons". It is *not* the sense of personhood as having multiple identities, the Amartya Sen describes himself as a person in a plural sense of meaning: a man, a philosopher, a

father, et cetera.[20] The plural form here is to say that personhood *is never singular* after the birth of the metaverse. That means, being a person in the world necessitates the *virtual* and *augmented* worldliness. For example, to be a citizen means to sufficiently – and not just necessarily – upload a lot and load of information to the cloud database.

Therefore, every single human being considered as a citizen of the physical world is *inevitably* a citizen of the metaversal world. This account must be considered differently, as the concept of a netizen (internet citizen) is insufficient or incomplete in this context. Before AIs, the word 'internet' has a very limited sense, i.e., to be connected to the greater network ("the net") and have the *freedom* to disconnect himself or herself from the whole network. Being a metaversal citizen means being denied the right to disconnect, as disconnection is no longer an option.

Disconnection from the metaversal world is practically impossible because our identities, interactions, and even our most basic societal functions have become *inextricably linked* to this digital realm. Human daily lives are increasingly mediated through digital platforms, from social interactions to financial transactions, to access to essential services like healthcare and education. The metaversal world, with its seamless integration of virtual and augmented realities, has expanded this dependency to a point where it is not merely a tool for convenience but a *fundamental* aspect of existence. To disconnect from the metaversal world would mean severing oneself from the social fabric, economic opportunities, and the ability to engage with the larger global community. This is not just a loss of convenience but a withdrawal from the very infrastructures that define contemporary human life.

Furthermore, the metaversal world has become a repository of personal histories, identities, and relationships. Digital footprints, stored across various platforms and interconnected systems, represent extensions of our personhood. These digital representations are no longer merely optional 'add-ons' to individuals' "real-world selves," but have become essential components in shaping how humans are perceived by others and how they navigate the world.

Severing this existential attachment would not just mean the loss of access, but the erasure of significant aspects of identity, as these digital

selves continue to exist and evolve independently of our physical presence. The metaverse has thus redefined what it means to exist, making the idea of a complete discharge not just impractical but a form of self-annihilation in a world where digital presence is tantamount to being.

Disconnection from social media, for example, is virtually impossible because these platforms have become integral to how we communicate, form relationships, and participate in society. For the generation cohort born after the introduction of smartphones ("Gen Alpha"), to be disconnected from popular communication platforms like WhatsApp or Line is similar to being excommunicated in the previous centuries. Social media are not just a medium for casual interaction; it has become the *primary* way through which people share information, build personal and professional networks, and engage in public discourse. In fact, one of the examples of the 21st century's cultural statements of being terminated from employment is to disengage from a 'chat-group' in such online media.

To disconnect from social media is to risk becoming socially invisible, as these platforms are where communities form, opinions are shared, and movements are mobilized. For many, these networks are also tied to their economic livelihood, whether through personal branding, influencing, or business promotion. The algorithms that drive social media engagement ensure that to remain relevant in the digital age, constant participation is required. As a result, disconnection equates to a loss of visibility, influence, and opportunities, making it an impractical choice for those who wish to maintain any form of active presence in today's heavily interconnected world.

This poses a serious challenge to the problem of *agency*. On one hand, biologicals like humans are inescapably burdened by dual personhoods: the *corporeal* agency rooted in their biological existence *and* the *noncorporeal-metaversal* agency that represents their digital selves. This duality creates a complex interplay between the two, where actions in one realm can have profound implications in the other, complicating the individual's ability to maintain consistent autonomy and identity.

On the other hand, artificial intelligence, unburdened by the limitations of biological existence, operates as a singular agency. Its streamlined nature allows AIs (including AGIs) to engage within the metaversal environment

with a level of precision and clarity that humans, constrained by their dual agencies, the physical and virtual, struggle to achieve. This discrepancy raises a profound question about the relationship between human and AI agents in the metaverse, as well as the significant ethical implications that arise from this divergence in capabilities and modes of operation.

The dual 'citizenships', "the *national* (governed by the laws of a nation states) and *metaversal* (governed by the 'contingencies' of multi-party agreements)," are incongruent in terms of needs and wants, leading to a disjointed existential experience. What a person *needs* in the physical world does not correlate with what a person *needs* in the metaversal world, creating a tension between the two. A biological person requires hours of rest to maintain physical health and cognitive function, adhering to the natural rhythms of their body, whereas a person in the metaversal world, represented by their digital self, does not prerequisite such necessities.

In the metaverse, there is no *need* for rest, sustenance, or other biological imperatives, allowing the digital persona to exist continuously and engage in interactions without the limitations imposed by a physical body. This state of uninterrupted presence redefines the constraints of human experience and creates a unique form of agency that is freed from the demands of biological existence, enabling constant participation in virtual environments. This divergence can create dissonance, where the demands of maintaining presence in the metaversal world might encroach upon the physical well-being of the individual. Moreover, the endless non-spatiotemporal possibilities in the metaverse can intensify the *wants* that have little to no bearing on the physical world, leading to potential neglect of the body's needs in favour of the virtual self's aspirations. This incongruence between the modes of being often leads to a fragmented sense of identity.

The issue becomes increasingly complex when AI is intricately employed by certain parties to carry out actions that have legal consequences. In this scenario, AI acts as an independent intermediary (*manus ministra*) for actions that can have significant implications before the law.[21] Parties with harmful intentions (*mens rea*) may exploit AI as the executor of the act (*actus reus*), effectively distancing themselves from direct responsibility. What remains largely unaddressed is the use of AI to assist in or even act as the primary

agent in committing crimes. AI can be employed, borrowing a term from qualitative research method, to conduct "random or purposive sampling" of potential victims and to *orchestrate* the crime.

In such cases, the *human operators*, who may be supported by transnational criminal organizations, set up the hardware and software but then allow the AI to take over the operation entirely. Any further interactions, if needed, could be conducted by the AI, potentially without human interference, enabling the AI to operate independently. The consequences of these actions, whether they involve financial loss or damage to one's reputation in the virtual, augmented, or real world, can become all too real in both the digital and physical realms.

The debate surrounding the legal personhood of AI, particularly AGI, within the metaverse typically revolves around the extent to which AI can be considered analogous to human characteristics. From this standpoint, usually the conclusion is rather consistent: AI is *never* to be classified as legal subjects that can be taken as a responsible agent before the law (the orthodox and the bundle theory). Considering the concept of legal personhood coping with the existence of AI, answers to questions such as "what defines a human as a legal person capable of bearing responsibilities and being held accountable for their actions or inactions" become more challenging and ambiguous.

A person is evaluated not only on the basis of intelligence but also on their capacity for emotions, empathy, compassion, and the freedom to reinvent themselves at various stages of life. While artificial intelligence is undeniably efficient, with its ability to rapidly compute, manage, and analyse vast amounts of data more precisely than humans, this efficiency alone raises the question: Does this make AI comparable to human beings in terms of personhood? To answer this question Kurki and Harari propose two different approaches.

For Kurki, the answer takes after the position similar to that of Spinozist *natura naturans*. For his objection to the orthodox view, Kurki traces the treatment by the Romans in three different categories: *personae* (persons), *res* (things), and *actiones* (actions). Early legal text such as *Institutes* (160 CE) does not strictly distinguish the difference between *personae* and *res*. The word '*persona*' has two dissimilar roles, the early secular '*prosopon*'

(*πρόσωπον* – translated as face) and the later religious '*hypostasis*' (*ὑπόστασις* – translated as substance). Kurki's defence takes the latter as the next logical steps to the introduction of '*universitas*' (corporation) as anything that is not a person and the '*caput*' in "*homo habens caput civile*" as the only legal standing possible for a human (*homo*). Later designation for the religious purpose of *universitas* is "*persona ficta*" – to address the legal personhood of monasteries.[22]

Kurki's arguments are intended to extend the scope of *persona ficta* to a minimum sentience, something that is not acknowledged by the orthodox view that is relied on '*caput*' in "*status civitatis*", or legally recognized persons.[23] Kurki thus maintains that initially the usage of *persona* is not necessarily in the strict corporeal sense; therefore, the extension of non-human animals' rights is deemed acceptable. As a further consequence, denying the legal personhood spectrum to sentient beings (as in the orthodox view) is not based on a strong logical basis.

For Harari, human unique traits trail differently from that of machines. However, controlling does not necessitate such traits. In another word, humans may excel in certain capacities that have no correlation with controlling technologies that have adverse effects on them. Put it simply, to control and command weapons of mass destruction does not prerequisite compassion and creativity. Harari emphasizes that intelligence alone – the ability to solve problems – is a single variable relevant to such mechanisms.

Harari maintains that the anthropocentric standing misses the underlying mechanism of how life works. The neuro-synaptic connections in the human brain are equivalent to any complex and plural mechanisms. To put it simply, there is never an '*I*' in the human phenomenon of consciousness; instead, a human decision is always a '*we*' in the form of neural, neuronal, and hormonal interactions.[24] In the light of Harari, Kurki's selected treatment is based on flawed logical grounding of the conceptual boundaries of 'intelligence.'

Kurki's reinforcement of the singular nature is built upon the Platonic conception of human beings; this has caused recursive debates that are completely irrelevant with the ongoing rise of AGI. On the contrary, Harari's non-anthropocentric standing is in line with the *transitive properties of nature*, that is, *if* (A)the plural mechanisms of synaptic connections in

the human body acknowledged as *persona ficta* are equal with or similar to those of any other mechanisms of *persona ficta* in incorporated bodies (B), *and if* such mechanisms ever existing as the homeostatic mechanisms or the celestial bodies interactions in nature (C) are equal with or similar to such incorporated institutions, *then* it is *sufficient* to address any similar mechanisms as *persona ficta*.

The Hararian version of legal personhood–the periscopic view–is the next logical and 'long-lost' (when it was invented in the Medieval Era) step from *persona ficta*. Nevertheless, the debate is still nowhere near resolving the issue of preventing the abuse of the intermediary action or the total replacement of human intervention to AIs' decisions. This status quo does not deter irresponsible parties from committing crimes and causing harm that often goes unrecognized by traditional law, which remains too limited in scope to effectively address such actions or maintain order in this evolving realm. As a result, legal frameworks struggle to keep pace with the rapid advancements in technology, leaving significant gaps that can be exploited by those with malicious intent.

Regulating AI and Virtual Worlds: The Role of Legal Systems

AI, even though it was created and developed by humans (it would be also possible that one AI created another), appears before humans and society as being alien or foreign. AI, such as deep blue, appears and is known as a sophisticated chess player but then only that, how it develops strategies on its own are beyond comprehension and give rise to the question what the essence of intelligence is? What impact has deep blue on chess players and chess competitions? A different sort of AI is those that work without ceasing to regulate, control and perform transactions at stock markets. Could they prevent market crashes and therefore – at some point acting independently from human operators – control the world economy? Both AI are similar in that both may learn and develop their knowledge and skills independent from humans who created them in the first place. Another similarity is that both (and many other AI) exist in virtual space. Computer hardware may not be regarded as its corporeal body.

A different question is whether AI may learn independently to cheat, or develop malicious tendencies, and not only do harm to humans but becomes evil, treating harms done to humans and society as collateral damage, justifying its actions by the goals to be secured. AI, for instance, may have been utilized in marketing and campaigns (political as well as economic), manipulating public consent, and finally in modern warfare. AI may be programmed to win the war efficiently or at all costs. To what extent then is such AI autonomous decisions accountable to humans (decision makers or programmers or operators)?

Harari and many other writers also conjure the dream of replacing professional human workers (knowledgeable and skilled), like lawyers and medical doctors with AI. AI may provide the legal or medical service cheaper, more consistently and free from human errors. In addition, those AI may always be programmed to be available at all times, not only during office hours, and never decide to be scarce because they need vacations or decided to go on strike. AI providing such services would be considered more reliable than their human counterparts, due to its comparative advantage in collecting and processing massive data more accurately and consistently.

In such scenario, where AI, fully existing in the virtual space, but replacing human beings in providing real life services, would man-made laws and regulations, including accountability-legal [professional] liability systems built based on our present understanding of legal subject and personality (natural and artificial) also be possible to include AI. Is human made law applicable to AI, can it be utilized to control, manage and discipline (recalcitrant) AI?

In comparison to other artificial legal bodies. We can imagine that states, governments and private companies operating in the economic sector possessed fictitious legal personality. Consequently, corporations are perceived as having the capability to act – independently from human operators – and intentionally and deliberately or by omission – cause harm to other human beings, even society and the state.

Public or private corporations are perceived as fictitious or artificial beings, albeit equal to humans in terms of their ability to think, act and make mistakes, and therefore may be called in front of the court of law

to account for their behaviour. The Jakarta provincial government, for instance, had been found guilty of neglecting its legal duties to prevent and mitigate worsening air quality. A more well-known example is provided by the movie, Blood Diamonds, in which a big multinational corporation, with the help of a corrupt government, is depicted as the perpetrator of a widespread, systematic and massive human right violation.

Corporations are certainly different from human beings. They cannot be punished with corporeal punishment. Additionally, the law provides the same sets of legal punishments. Corporations as well as human, found guilty of transgressing the boundaries of human made law, may be sentenced to publicly admit their wrongdoings and seek forgiveness (satisfaction), make compensation (in integrum or in kind) or reimburse and pay cost incurred by the injured party and lastly pay the fine imposed by the court

Is it feasible or even necessary to extend legal personality also to AI, using similar arguments justifying the extension of legal personality to corporations? Is it ethically necessary to demand from AI, super intelligent beings, legal accountability in case humans and society suffers damage or injury due to their commission or omissions? AI is part of many games online, can it be programmed to cheat, or can it independently learn to cheat the game? What about AI controlling and managing online gambling which in Indonesia is declared to be against the law? In the case they soon successfully replace human lawyers and medical doctors, and they make mistakes (due to a glitch or are they immune to making errors?), how would the law develop and determine who is at fault? Would the AI independently making the wrongful diagnosis and prognosis be declared responsible and somehow be punished?

Another related issue is the limited reach of man-made laws and regulation to reach actors (extended, augmented or virtual personae) and behaviour fully performed in the cyber space with spill over to the real world. To the extent that humans are somehow identified as behind those personae, we can creatively conjure new categories for commissions and omissions done in the virtual world. Hackers enter and break (trespasses) into other people's accounts, steals (private data or other electronic information stored, or infect data with viruses, or hijacked data for ransom.

It is also conceivable that bitcoins, (recognized as having economic value) fully existing only in the virtual world, are treated as possession. Likewise, prizes obtained in virtual online games can be illegally taken by other players. In other words, real world language is transposed into the virtual world. But is the reality made by AI like the virtual-cyber world created by the internet.

Granted that AI truly developed into an independent (virtual) intelligent sentient, become autonomous, independent from human programmers or operators, and can make decisions on its own, would human made laws be still of use or should they be required to make their own laws based on a very different set of morality. At this point, every argument for and against seems still farfetched.

Conclusions

The question touches upon complex issues related to the relationship between humans, artificial intelligence (AI), and the legal status of digital entities in the virtual world. In the context of AI 'living' in a virtual world and operating autonomously from its programmers or command-givers, the question of who holds authority over AI becomes both intriguing and significant.

Traditionally, AI systems are created and controlled by programmers or the companies that develop them. As technology advances, some types of AI are gaining more autonomy, making decisions based on evolving algorithms and machine learning processes. This raises the question: does AI still have a 'master' who can issue commands and enforce discipline if it fails to perform as expected?

If we view AI as a tool created by humans, its master would logically be the individual or entity, such as a corporation, that owns and controls it. However, as AI systems gain the capacity to operate autonomously, the distinction between human control and AI autonomy becomes increasingly ambiguous. While companies may retain the authority to command and oversee AI systems, their ability to 'discipline' AI hinges on the technical design that permits operational constraints or shutdown mechanisms.

The degree of human oversight over AI is directly related to the level of autonomy afforded to it. Simpler forms of AI, such as recommendation algorithms in social media, remain highly dependent on human control. In contrast, more advanced AI systems, such as those used in automated stock trading or autonomous robotics, exercise greater independence, making decisions based on data inputs and algorithmic processes with reduced human intervention.

Nevertheless, AI may not entirely escape human oversight due to existing legal and regulatory frameworks. Humans, whether through legislation or technical standards, for the time being remain responsible for ensuring that AI operates ethically and serves its intended purposes. As AI becomes more autonomous, these boundaries of control will be increasingly tested. The more profound question that arises is whether AI could eventually be regarded as a legal subject with legal personhood, akin to how corporations are considered separate legal entities from the individuals who operate them.

In law, corporations are recognized as 'persons' who can hold rights, obligations, and be held accountable through litigation. This legal structure works because, although operated by humans, corporations exist as distinct entities. However, as AI begins to make autonomous decisions, the question of whether AI, particularly in its more advanced forms like Artificial General Intelligence (AGI), should be granted a form of legal personhood becomes increasingly mandatory.

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