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A PHILOSOPHICAL RECONSTRUCTION OF HUMAN
AGENCY IN THE ALGORITHMIC ERA**Rikardus Kristian Sarang^{1*}, Septiana Dwiputri Maharani²¹Sekolah Tinggi Katolik Santo Yakobus Merauke, Indonesia rikardkristians@stkyakobus.ac.id <https://orcid.org/0009-0009-5324-9655>²Fakultas Filsafat Universitas Gadjah Mada Yogyakarta, Indonesia septiana.dm@ugm.ac.id <https://orcid.org/0000-0002-5404-5269>

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DOI: 10.35631/IJHPL.935007**Abstract:**

Algorithmic transformation and intensifying datafication have brought fundamental changes to the ways human beings are understood, represented, and positioned in contemporary life. This article examines Yuval Noah Harari's conception of the transformation from Homo sapiens toward the condition of the datafied self and its implications for understanding human agency in the algorithmic era. Employing a critical conceptual analysis through a hermeneutic reading of Harari's works and scholarly discussions on datafication, algorithmic governance, and AI ethics, this study argues that the development of algorithmic systems does not necessarily eliminate human agency but rather transforms the conditions under which it operates. The datafied self represents a new form of subjectivity in which human identity, behavior, and preferences are increasingly mediated by data-driven systems and algorithmic processes. This article argues that human agency remains significant but requires a philosophical reconstruction that preserves the reflective, relational, and ethical dimensions of human existence amid increasingly complex relationships with technology.

Keywords:

Algorithmic Governance; Algorithmic Subjectivity; Datafied Self; Human Agency; Human Dignity



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Introduction

The development of digital technologies, particularly through the expanding use of algorithmic systems and data processing, has transformed the ways human beings interact with the world and understand themselves. Data, which previously served primarily as a record of human activity, has gradually become a source of knowledge used to interpret behavior, generate predictions, and create representations of individuals and social groups. In this context, humans are not merely users of technology but have also become part of an environment that is heavily influenced by data-driven mechanisms and algorithmic processes. This transformation raises questions that extend beyond technological advancement itself. This relates to how the position of humans as subjects can be understood when human experiences, choices, and actions take place in a space mediated by algorithmic systems. Therefore, algorithmic transformation must be understood comprehensively. Such a transformation is not merely a technical development but also a philosophical shift related to freedom, subjectivity, and the human capacity to act as reflective subjects.

Humanity is undergoing a profound transformation driven by advances in biotechnology, artificial intelligence, and Dataism; a new ideological orientation that places increasing authority on data and algorithms in interpreting reality and human decision-making (Romualdi, 2020; Strawn, 2017). From Harari's perspective, this trajectory points toward a future in which human beings may acquire unprecedented capacities to reshape life and the environment. This transformation signifies more than just an expansion of technical capabilities; in a certain sense, it even represents a fundamental change in the ontological status of the human species. Humanity is no longer viewed solely as a species defined by its capacity to construct narratives, but rather as an entity capable of directing and engineering the evolutionary process itself.

This issue becomes particularly complex when viewed through the lens of Yuval Noah Harari's thesis on human transformation. In *Sapiens*, he demonstrates that the ascendancy of *Homo sapiens* was not primarily on biological superiority, but on the unique capacity to construct intersubjective myths that facilitated large-scale cooperation (Harari, 2015). In one of his works, *Homo Deus* however, this evolutionary journey shifts toward a new era, in which the convergence of biotechnology and information technology opens up unprecedented possibilities for engineering human life itself (Harari, 2017). This socio-technical synthesis culminates in Dataism, a worldview that elevates the flow of data and the computational capacity of algorithmic systems into the primary source of authority for deciphering reality (Harari, 2018). Within this conceptual framework, humans are increasingly understood solely as biochemical systems that operate through information-processing mechanisms, making them entities that can be systematically predicted, managed, and optimized through digital architecture.

Harari's perspective raises philosophical tensions regarding the status of humans as free and reflective agents. If algorithms are capable of identifying behavioral patterns, predicting choices, and even providing recommendations that influence human decisions, then the question arises: to what extent do humans still retain control? How much control do individuals still have over themselves? Or, indeed, are humans still autonomous individuals? However, the issue goes beyond the technological capacity to replace certain human functions; it concerns more fundamental questions about what constitutes human agency and the conditions that allow that agency to persist.

Several critiques of Harari's thought suggest that conceptualizing human beings as biological algorithms risks reducing essential dimensions of human existence, including dignity, moral responsibility, freedom, and reflective capacity (Martin, 2020; Munnik, 2019; Pöder, 2022; van Niekerk, 2020). From the perspective of philosophical anthropology, humans cannot be reduced merely to entities that process information. Human existence is also characterized by the ability to create meaning, to take a reflective step back from oneself, and to take responsibility for one's actions.

Meanwhile, contemporary scholarship on algorithms demonstrates that the question of humanity in the digital era cannot be understood solely through the framework of technological threat or technological substitution of human capacities. Studies on algorithmic governance show that algorithms have become a key component of decision-making processes in various areas of life, raising concerns about transparency, accountability, and human involvement in these systems (Mittelstadt et al., 2016; Danaher et al., 2017). Meanwhile, research on algorithmic authority suggests that interactions between humans and AI generate transformations in the distribution of responsibility and decision-making processes, while not necessarily eliminating human involvement altogether (Heaton et al., 2023; Karpova, 2025). These developments indicate that within human-technology relations, agency may undergo processes of negotiation and redistribution rather than merely facing loss or elimination (Da, 2025; Csernaton et al., 2025).

However, much of the existing scholarship remains focused on technological, ethical, or algorithmic governance dimensions, while the philosophical question of how human beings continue to be understood as subjects within the condition of the datafied self requires further examination. This gap indicates the need for deeper inquiry into how the transformation of humanity toward the phenomenon of the datafied self-reconfigures philosophical understandings of human beings as subjects and agents. Therefore, this article presents Harari's ideas as a space for philosophical reflection on the changing status of humanity in the age of algorithms. It addresses the following question: how does Yuval Noah Harari's conception of human transformation toward the datafied self-reshape the understanding of human agency in the algorithmic era?

Building on this argument, this article does not assume that the expanding role of algorithmic systems will automatically eliminate human agency altogether, nor does it disregard the risk of reducing human beings to mere objects of digital calculation. Instead, it argues that the transformation toward the datafied self represents a fundamental shift in the conditions under which human subjectivity and agency are formed. Human agency has not disappeared; on the contrary, it is undergoing a process of reconstruction amid the increasingly complex relationships between humans, technology, and algorithmic systems. In this context, human intuition is understood as a form of situational judgment that involves sensitivity to values,

context, and specific situations, which continue to play a vital role in creativity, ethical evaluation, and professional decision-making (Afrikanov, 2025). Through a critical conceptual analysis of Harari's works and a dialogue with perspectives from philosophical anthropology and AI ethics, this study seeks to: (1) reconstruct Harari's account of the transformation from Homo sapiens toward the datafied self; (2) analyze the implications of this transformation for the concepts of freedom, autonomy, and human agency; and (3) offer an understanding of how human agency in the algorithmic era can be sustained through human reflective, relational, and ethical capacities.

Literature Review

Datafication and the Algorithmic Construction of Human Subjectivity

Contemporary digital transformation has reshaped how human beings are understood through processes of datafication. Van Dijck (2014) explains that datafication refers to the process by which various human activities, behaviors, and interactions are transformed into a form of data that can be collected, analyzed, and used as a basis for generating knowledge about social reality. Within this framework, data no longer functions merely as a record of human activities but has developed into a paradigm that shapes how knowledge about human beings is produced. This transformation is closely related to the emergence of Dataism, a conceptual orientation that perceives the flow of data and the capacity of algorithmic systems to process information as new sources of authority for interpreting various phenomena of life (Harari, 2018). This shift suggests that the development of digital technologies does not merely furnish new instruments for human activities but also produces an epistemological shift in how human beings are represented and understood.

In a society that is increasingly reliant on digital systems, algorithms play a crucial role in shaping our understanding of individuals. Bucher (2018) explains that the power of algorithms lies not only in their technical capacity to process information, but also in their ability to select, organize, and shape what information becomes visible. In line with this perspective, Ulbricht and Katzenbach (2019) argue that algorithms have become an integral component of algorithmic governance, which is a form of governance that operates through processes of classification, prediction, and data-driven decision-making. Therefore, algorithms can no longer be understood merely as neutral technical instruments, but rather as systems that actively participate in shaping the relationships between humans, knowledge, and social structures.

In this context, the datafied self becomes important for understanding the changing position of humans within the algorithmic environment. The development of information technologies, as discussed by Harari (2017, 2018), suggests that humanity has entered a new historical condition in which life is increasingly mediated by flows of information and the capacity of digital systems to process data. However, the concept of datafied self does not imply that humans completely transform into a collection of data; rather, this concept describes a condition where human identity, behavior, and preferences are increasingly represented through data-based mechanisms (van Dijck, 2014). This situation gives rise to a philosophical tension regarding the relationship between humans as subjects of experience and humans as objects of algorithmic representation. As individuals are increasingly interpreted through the data patterns generated by their digital activities, the question of how humans maintain the ability to understand and define themselves becomes ever more important. These questions serve as the basis for further discussion on the relationship between algorithmic systems and human agency.

Algorithmic Governance and the Transformation of Human Agency

Advances in algorithmic systems have transformed technology from a tool for processing information into an active component in decision-making across various aspects of human life. Danaher et al. (2017) explain that algorithmic governance illustrates how algorithms increasingly participate in organizing, directing, and influencing decision-making processes. In this context, algorithms do more than simply provide information to support human decision-making. Algorithms shape the decision-making environment through processes of classification, recommendation, and prediction. This development reflects a shift in the relationship between humans and technology; this is because human decisions are increasingly made within an environment shaped by algorithmic systems. The central question, however, extends beyond the capacity of algorithms to generate efficient decisions; it concerns how such transformations affect the position of human beings as agents capable of exercising judgment and assuming responsibility for their actions.

The increasing use of algorithms in decision-making processes has raised various ethical concerns regarding transparency, accountability, and responsibility. Mittelstadt et al. (2016) show that algorithms cannot be understood solely in terms of their technical accuracy, because algorithmic systems also carry normative implications for individuals and society. As more and more decisions depend on systems that operate through complex computational processes, questions arise about who should be held responsible when those decisions result in certain consequences. This issue becomes more complex because human beings often encounter systems whose internal operations cannot be fully understood or directly interpreted. As a result, algorithm-based decision-making presents new challenges to the concept of human responsibility, as decisions are no longer solely shaped by individual considerations, but increasingly emerge through the interaction between human actors and technological systems.

Although algorithms have brought about significant changes in the way humans make decisions, recent studies show that the relationship between humans and technology does not automatically lead to a loss of human agency. Heaton et al. (2023) show that the involvement of algorithms in the decision-making process affects how humans understand trust, responsibility, and attribution of error, while humans remain involved in interpreting and evaluating those decisions. Similarly, Karpova (2025) explains that the emergence of algorithmic authority does not automatically replace human authority but rather creates new forms of division of responsibility between humans and artificial intelligence systems. Accordingly, the relationship between humans and AI is more appropriately understood as a process of agency reconfiguration rather than as the elimination of human capacity for action (Csernaton et al., 2025; Da, 2025). In this condition, humans are not entirely free from the influence of algorithms, but they also do not completely lose their ability to reflect and act. In other words, there remains a space for preserving the irreducible dimensions of human agency amid the disruption brought by the automation of infotech (Afrikanov, 2025).

Although studies on algorithmic governance have provided important insights into how algorithms influence decision-making, responsibility, and social structures, these approaches still leave a more fundamental question concerning the nature of human beings as responsible agents. Much of this scholarship explains how humans interact with algorithmic systems within social and institutional contexts. However, this does not fully answer the philosophical question of what enables humans to remain subjects capable of understanding, evaluating, and giving meaning to their own actions. This issue becomes particularly significant in the context of the

datafied self, where humans not only use algorithmic systems but are also increasingly interpreted through data-based representations generated by these systems. Therefore, a discussion of human agency in the algorithmic age requires a philosophical approach capable of shedding light on the reflective, normative, and existential dimensions of human existence.

Philosophical Perspectives on Human Agency and Human Dignity

Due to the advancement of information technology and biotechnology, Yuval Noah Harari's reflections on human transformation have sparked philosophical debates about how humanity should be understood amidst the emerging new conditions. From Harari's perspective, the development of infotech and biotech enables human beings to be understood through informational mechanisms and biological processes that can be analyzed and potentially predicted (Harari, 2017, 2018). This perspective raises fundamental philosophical questions concerning the implications of conceptualizing human beings increasingly through algorithmic logic.

Martin (2020) demonstrates that one of the central concerns in Harari's thought lies in the possibility of human reduction when human existence is understood primarily through biological functions and information-processing capacities. The debate about the future of humanity is not only related to the ability of technology to enhance human capabilities but also concerns how humans can continue to be understood as subjects with value, responsibility, and the capacity to determine their own fate.

Critiques of Harari's thought further suggest that the central issue does not lie in technological development itself, but rather in how technology shapes the ways human beings understand themselves. Munnik argues that Harari's narrative about the future of humanity needs to be approached critically, as the narrative tends to depict technological development as a historical trajectory that seems difficult to avoid (Munnik, 2019). This means that, philosophical challenges arise when algorithmic prediction and optimization are increasingly seen as the main foundation for understanding human life. Pöder (2022) expands on this discussion by arguing that the transformation of humanity toward the condition envisioned by Harari creates philosophical tensions regarding the relationship between technological advancement and the normative dimensions of human existence. Humans are not only characterized by biological capacity and the ability to process information, but also by dimensions of values, meaning, and responsibility that cannot be fully reduced to technical processes. This perspective becomes particularly significant in the context of the datafied self, as the representation of human beings through data may shift attention away from humans as subjects of experience toward viewing humans as objects of algorithmic classification and prediction.

This debate indicates that the concept of human agency in the algorithmic era requires a broader understanding than merely the ability to make choices. Van Niekerk (2020) demonstrates that discussions concerning the future of humanity in Harari's thought are closely connected to questions regarding the position of human beings when technology progressively shapes the ways they perceive themselves and the world around them. The role of humans cannot be understood as a capacity that is entirely separate from technology; nor, on the other hand, should it be reduced to the result of an algorithmic process. Rather, the central question concerns how human beings preserve their reflective capacity and responsibility while existing within environments pervasively mediated by data-driven systems and algorithms. Therefore, philosophical perspectives on humanity provide a foundation for understanding that the

transformation toward the datafied self does not automatically eliminate human agency but instead creates the need to reconsider how human agency is preserved and exercised under changing technological conditions.

Research Position: Toward a Philosophical Reconstruction of Human Agency in the Datafied Self

Existing scholarship has increasingly examined the relationship between humans, data, and algorithms across various fields of inquiry. Research on datafication explains how human activities are increasingly being translated into data that can be collected, analyzed, and used to interpret patterns of human behavior (van Dijck, 2014). Studies on algorithmic governance further reveal that algorithms operate beyond their technical functions, becoming mechanisms through which classification, decision-making, and aspects of social life are organized (Danaher et al., 2017; Ulbricht & Katzenbach, 2019). Research on algorithmic ethics has further expanded this discussion by highlighting issues of transparency, accountability, and responsibility in the use of algorithmic systems (Mittelstadt et al., 2016). While these studies provide valuable insights to understanding the social and ethical implications of technological development, much of the existing scholarship remains focused on how algorithms operate within social structures and decision-making processes.

Beyond these technological and ethical discussions, philosophical critiques of Harari's thought indicate that human transformation in the technological era concerns not only changes in technical capabilities, but also the ways in which human beings understand themselves as subjects (Martin, 2020; van Niekerk, 2020). However, there remains a need for further inquiry into how the transformation toward the condition of the datafied self-reconfigures philosophical conceptions of human agency.

Based on this gap, this article argues that the central issue in the algorithmic era is not merely whether human beings will be replaced by machines, but rather how they can preserve their capacity as agents when their identities, decisions, and behaviors are increasingly mediated by data-driven systems. It must be understood that the role and existence of humans do not completely disappear in the context of datafication; rather, that role is reconfigured through the complex interplay between technology, algorithmic systems, and humans themselves. Therefore, the contribution of this article lies in the effort to reconstruct the philosophical understanding of human agency in the context of algorithmic transformation, by positioning humans not as passive objects of data systems, but as subjects who still possess reflective capacity, responsibility, and the ability to interpret their actions.

Method

This study adopts a critical conceptual analysis approach, integrating thematic text analysis with a hermeneutic reading of Yuval Noah Harari's works and related literature on datafication, algorithms, and human agency. This methodological orientation is adopted because the study does not aim to generate empirical data, but rather to critically examine the concepts through which humanity is understood in the algorithmic era. This conceptual analysis focuses on the main ideas in Harari's thought, including Dataism, the conception of humans as biochemical algorithms, and the transformation of humanity in relation to the development of information technology and biotechnology (Harari, 2015, 2017, 2018). Furthermore, concepts within algorithmic studies, such as algorithmic authority, algorithmic governance and agency are

critically examined to identify the anthropological assumptions underlying the relationship between humans and algorithmic systems (Danaher et al., 2017; Ulbricht & Katzenbach, 2019).

The primary works examined in this philosophical study consist of three of Harari's core ideas, as presented in three books; *Sapiens - A Brief History of Humankind*, *Homo Deus - A Brief History of Tomorrow*, and also *Twenty First Lessons for the 21st Century*. These works are analyzed in dialogue with literature on datafication, algorithmic ethics, and the transformation of human agency in the era of artificial intelligence (van Dijck, 2014; Mittelstadt et al., 2016; Karpova, 2025). The analysis is organized around several themes related to human transformation, including Dataism, algorithmic authority, the representation of human beings through data, and changes in the conditions of human agency within increasingly technology-mediated environments. This approach enables the study to map the conceptual relationship between Harari's ideas concerning the future of humanity and contemporary discussions on algorithms, responsibility, and the position of human beings as subjects.

The final analytical process consists of a hermeneutic reading and philosophical analysis of Harari's narratives within the contexts of philosophical anthropology and technological ethics. Harari's works are understood not merely as historical narratives of human development, but also as intellectual analyses that contain normative assumptions about the nature of humanity, freedom, and the future of human existence. This interpretation is examined alongside perspectives that question the possibility of reducing human beings into information systems or biological algorithms (Munnik, 2019; Pöder, 2022). Through this process, the study seeks to develop a philosophical reconstruction of how human agency is positioned in the transition toward the datafied self, while considering the tension between algorithmic power and human capacities for reflection and responsibility for their own actions.

Results and Discussion

From Homo sapiens to Datafied Self: Algorithmic Reconfiguration of Human Subjectivity

Yuval Noah Harari's reflections on the future of humanity begin with a historical analysis of how *Homo sapiens* became a dominant species through the capacity to construct shared realities based on language, symbols, and collective narratives (Harari, 2015). From Harari's perspective, the success of human history is not solely determined by biological capacity, but also by the ability to create systems of meaning that enable large-scale cooperation. Extending this historical analysis, particularly in *Homo Deus* and *Twenty first Lessons for the 21st Century*, Harari argues that advances in information technology and biotechnology have begun to transform the ways human beings understand themselves (Harari, 2017, 2018). This transformation extends beyond technological expansion by raising philosophical questions regarding the position of humanity when processes previously regarded as distinctively human, such as decision-making and behavioral interpretation, become increasingly accessible to analysis through data-driven and algorithmic systems.

A central element in Harari's thought is the concept of Dataism, which refers to the view that the flow of information and the capacity of systems to process data constitute a new foundation for interpreting reality (Harari, 2018; Pinn, 2018). Within this framework, humans are increasingly understood as part of a broader information system. Every human activity-such as biological processes, behavior, and preferences-can be translated into data patterns that can be interpreted in a broad and open manner. Harari's conception of humans as biochemical

algorithms reflects the assumption that human mental processes and decision-making possess algorithmic dimensions that enable measurement and prediction through computational systems (Harari, 2017). However, this development does not merely produce technical changes in the ways humans manage information, but also transforms how human beings are interpreted and understood. Therefore, the process of datafication demonstrates that various human activities are increasingly being transformed into data, which is then used as a basis for interpreting, classifying, and predicting human behavior (van Dick, 2014).

This development and transformation can be understood through the emergence of the datafied self, which refers to a condition in which people are increasingly understood through data representations generated from their digital activities. This concept does not imply that humans completely transform into a collection of data but rather shows that data has become one of the main mediums in shaping the conception of human identity, behavior, and preferences. (van Dijck, 2014). Within digital environments, algorithms participate in organizing information, determining patterns of visibility, and shaping categories of individuals through processes of classification and prediction (Bucher, 2018; Ulbricht & Katzenbach, 2019). As a result, the relationship between humans and their own representations has undergone a significant transformation. Human beings generate data through their activities while simultaneously encountering algorithmic representations that contribute to shaping how they are understood within digital social spaces.

Within this framework, the transformation toward the datafied self should be understood as a reconfiguration of human subjectivity rather than the disappearance of human beings as subjects. Data and algorithms contribute to expanding human capacities for identifying behavioral patterns and supporting decision-making processes. At the same time, however, this raises the question of how humans maintain their position as beings capable of understanding, evaluating, and giving meaning to themselves. As algorithmic representation becomes increasingly important in shaping how humans are depicted and interpreted, the issues that arise are not only related to the capabilities of technology but also to the relationship between humans as subjects of experience and humans as objects of data classification. This tension provides the foundation for further analysis of how algorithmic authority influences the conditions of human agency within increasingly digitalized societies.

Algorithmic Authority and the Vulnerability of Human Agency

The development of algorithmic systems has transformed the way decisions are made and disseminated across various aspects of human life. This reality is underscored in research analyses (Danaher et al., 2017; Ulbricht & Katzenbach, 2019) on algorithmic governance. Algorithms are now understood as more than just technical tools for information processing; they are mechanisms involved in classification, prediction, and decision-making. The ability of algorithms to process large amounts of data has contributed to the emergence of various new forms of authority that operate through computational knowledge. In this condition, decisions are not always made through direct human consideration but are increasingly influenced by systems that organize information and provide recommendations based on certain patterns. This transformation does not indicate that humans have lost their role in the decision-making process but rather shows a change in the relationship between humans and the sources of authority that shape those decisions.

The emergence of algorithmic authority, therefore, raises questions about transparency, accountability, and responsibility. Mittelstadt et al. (2016) explain that the ethical challenges of algorithms are not only related to the technical capacity of systems to generate predictions or decisions, but also to the normative consequences that arise when such decisions affect individuals and society. One of the central concerns lies in how human beings understand and evaluate decisions informed by algorithmic systems, particularly when the internal processes of algorithms are not fully visible to users. Therefore, algorithmic power operates not only through the decisions it produces (Bucher, 2018), but also through mechanisms of selection and visibility regulation that determine what information becomes visible and how individuals are positioned within digital spaces. Accordingly, the vulnerability of human agency does not emerge simply because humans are no longer able to act, but because the conditions under which actions are performed are increasingly shaped by systems operating through algorithmic logic.

In the context of the datafied self, this issue becomes very complex because humans not only interact with algorithms but are also increasingly understood through the data generated from their own activities. Algorithmic systems can construct individual representations based on behavior patterns, preferences, and digital interaction histories, which are then used to generate predictions and recommendations (van Dijck, 2014; Bucher, 2018). Such conditions raise questions about the extent to which humans still have the ability to reflect on their self-representation constructed by algorithmic systems. Heaton et al. (2023) show that the use of algorithms in the decision-making process is closely related to issues of trust, attribution of responsibility, and the relationship between humans and the systems that assist in that decision-making process. Therefore, the challenge to human agency does not primarily lie in the loss of the human capacity to choose, but rather in the transformation of the epistemic and social environment in which those choices are made.

In light of these developments, the role of humans in the algorithmic era must be understood as a capacity undergoing reconstruction rather than one that is simply being replaced by technology. The relationship between human beings and algorithmic systems produces new forms of distributed authority, responsibility, and decision-making (Karpova, 2025; Csernatonii et al., 2025; Da, 2025). Humans continue to play a role in interpreting, evaluating, and determining how technology is utilized, even though these processes increasingly take place within environments shaped by algorithms (Afrikanov, 2025). Therefore, the central question concerns how the reflective and normative dimensions of human agency can be preserved when human decisions increasingly occur within spaces mediated by algorithmic systems.

Beyond Algorithmic Reduction: Reconstructing Human Agency in the Algorithmic Era

Harari's conception of human beings as biological systems operating through algorithmic processes raises fundamental questions concerning the boundary between technological explanations of humanity and the irreducible complexity of human subjectivity. Within the framework of Dataism, humans are conceptualized as part of an information network in which behaviors, decisions, and preferences can be analyzed through computational processes (Harari, 2017, 2018). However, critics of this perspective argue that human existence cannot be reduced solely to biological capacities or information-processing abilities. Martin (2020) argues that reducing human beings to biological and informational mechanisms risks overlooking the normative dimensions of humanity as beings capable of valuing and assuming responsibility. The central issue in the algorithmic era, therefore, does not concern rejecting

technological capacities to explain certain aspects of human beings. Rather, it concerns whether the entirety of human existence can be adequately explained through an algorithmic framework.

The critique of algorithmic reduction demonstrates that human agency extends beyond the mere capacity to make decisions. Munnik (2019) emphasizes that technological development within narratives about the future of humanity should be critically examined, as it may reshape how human beings understand themselves in relation to technology. Meanwhile, Pöder (2022) argues that technological transformations of humanity raise questions regarding the continuity of values embedded in human existence, including human dignity and moral responsibility.

In the context of the datafied self, this perspective becomes very important because humans are not only users of technology but also objects of representation through systems that classify and predict their behavior. This understanding clearly indicates that the role and existence of human beings should not be understood as the ability to act without external influence, but rather as the human capacity to reflect, make decisions, and take responsibility for their actions under specific circumstances.

From this perspective, the reconstruction of human agency in the algorithmic era does not imply a defense of the view that humans are fully autonomous from technology. The condition of the datafied self therefore reveals that human actions increasingly take place within environments shaped by data flows, recommendation systems, and algorithmic structures. Van Niekerk (2020) argues that technological development raises questions about how humans maintain their understanding of themselves, as technological capabilities increasingly encroach upon realms that were previously considered unique dimensions of human existence. Human agency should be understood as a relational capacity that is realized through interactions among people, technology, and their social environment. From a cultural perspective, practices of agency, resistance, and negotiation show that the subject is neither a completely passive actor nor a fully autonomous one in relation to algorithmic power (Sued, 2023). Human beings retain the capacity to evaluate, question, and direct the use of technology, even though these processes unfold within conditions increasingly shaped by algorithmic systems.

Based on this analysis, the study argues that the algorithmic era should not be understood as the end of human agency, but rather as a condition that demands a philosophical reconstruction of the concept of agency itself. Human beings continue to exercise agency and retain certain forms of authority within this changing technological environment (Afrikanov, 2025). The datafied self presents particular challenges because human beings are increasingly understood through data representations; however, this condition does not automatically eliminate their capacity to remain subjects capable of reflection and giving meaning to their actions. The main challenge lies in striking a balance between leveraging algorithmic capabilities and protecting the human dimension-which encompasses personal aspects, dignity, responsibility, and normative judgment. From this perspective, the relationship between humans and technology should not be understood as a process of replacement, but rather as an evolving negotiation space between algorithmic capacities and human capacities in directing the use of technology.

Ethical Implications: Protecting Human Dignity in Datafied Society

The transformation toward a society increasingly mediated by data and algorithms brings ethical consequences that are inseparable from the issue of human agency. As humans are

increasingly understood through data representation, the main focus is not only on how technology produces more efficient decisions but also on how to ensure that humans are still recognized as subjects with value and responsibility. The use of algorithms raises ethical issues related to transparency, accountability, and the impact of decisions on individuals, and must continue to respect human autonomy (Mittelstadt et al., 2016). Within the context of the datafied self, these concerns become increasingly complex because algorithms extend beyond processing information about human beings and may also shape how individuals are categorized and understood. The ethical dimension of an algorithmic society must focus on efforts to maintain a balance between utilizing computational capabilities and protecting the position of humans as moral agents.

One of the important implications of this condition is the need to preserve human dignity within environments that are increasingly dependent on algorithmic systems. Critiques of Harari's thought indicate that technological development may generate philosophical concerns when human beings are understood primarily through measurable biological and informational capacities (Martin, 2020; Munnik, 2019). Ethical principles remain important in ensuring respect for human dignity in algorithmically mediated environments. This perspective implicitly challenges the reduction of human beings to data-driven algorithmic representations and emphasizes that AI systems should not replace human autonomy and agency but rather function as supportive systems that strengthen human capabilities (Floridi et al., 2018). This position does not imply that technology should be rejected; instead, it highlights the necessity of establishing conceptual boundaries to prevent human beings from being reduced to mere objects of data processing. Pöder (2022) emphasizes that human transformation in the technological era requires consideration of normative dimensions related to human values and meaningful existence. Protecting human dignity requires maintaining the recognition that individuals are not merely collections of data or predictable behavior patterns, but subjects capable of making decisions about themselves and the world around them.

Beyond human dignity, the question of responsibility further extends the ethical discussion surrounding algorithmic societies. Van Niekerk (2020) highlights that the development of modern technology raises fundamental questions about the position of humans. The question always arises, how do human responsibilities and roles change when many tasks can be taken over by technology? Is humanity still autonomous? Are humans still empowered? Or is it time to surrender to the algorithmic system? As technology increasingly encroaches upon areas previously considered the realm of human autonomy, which also constitute a unique dimension of human existence-humans must determine where they stand. Under such circumstances, responsibility cannot be fully delegated to algorithmic systems. Therefore, algorithmic systems must remain within a social context that is designed, used, and interpreted by humans. In principle, the use of algorithms must continue to uphold the principle that humans maintain a normative role in determining goals, evaluating consequences, and directing the use of technology.

This analysis indicates that the primary challenge of a datafied society does not lie in the existence of algorithmic technologies themselves. The fundamental issue concerns how human beings preserve their capacity as subjects within increasingly integrated relationships with technological systems. Protecting human agency demands an approach that goes beyond technical evaluation of algorithms. It must integrate critical education, ethical awareness, and recognition of human dignity in the decision-making process. From this perspective, technology should not be viewed as a replacement for humans, but rather as a new environment

that demands new forms of reflection on freedom, responsibility, and human dignity. In other words, a datafied society requires an ethical framework that allows humans to remain the center of moral consideration, even as social life becomes increasingly shaped by data-based systems and algorithms.

Conclusion

Harari's intellectual trajectory regarding the future of humanity demonstrates that technological transformation does not merely alter the ways in which human beings interact with the world but also reshapes how they understand themselves. Through the concepts of Dataism, the development of infotech and biotech, and the understanding of humans as entities progressively interpreted through information, Harari illustrates a shift from human beings as creators of meaning toward individuals pervasively situated within networks of data and algorithms. However, the transition toward the condition of the datafied self should not be understood as the end of humanity as a subject. It represents a substantial reconfiguration in the ways human subjectivity is formed, represented, and negotiated within environments increasingly mediated by technology.

This study argues that the central issue in the algorithmic era does not concern whether *human agency* may disappear, but rather the transformation of the conditions under which agency is exercised, but rather in the transformation of the conditions under which agency takes place. As human behavior, preferences, and decisions are increasingly interpreted through algorithm and data, humans still retain the capacity to act. Of course, the actions in question take place within an environment whose structure has undergone significant transformation. It is clear here that human agency can no longer be understood solely as something separate from external influences. Rather, it involves a responsibility as a reflective capacity that continually negotiates the social, technological, and informational conditions that shape human life itself.

This article demonstrates that human agency in the context of the datafied self is not eliminated but requires philosophical reconstruction. Humans still have the ability to give meaning, make judgments, and take responsibility for their actions, even though these processes increasingly occur in relation to more complex and open technology. From this perspective, philosophical anthropology provides a critical framework for evaluating technological developments beyond mere computational capabilities. This relationship presupposes and emphasizes its ability to value human beings as subjects endowed with dignity, moral responsibility, and reflective depth. Finally, it must be recognized and remain a belief that the relationship between humans and technology, both now and in the future, will not be determined by the dominance of one party over the other. This relationship will continue to exist in the context of humans as autonomous individuals capable of building ethical, critical, and responsible relationships with the ever-evolving technological environment.

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References

- Afrikanov, L. (2025). Intuition as a foundational human competence for creativity, ethics, and professional judgment in education in the age of artificial intelligence. *Journal of Education and E-Learning Research*, 12(4), 714–719. <https://doi.org/10.20448/jeelr.v12i4.7883>
- Bucher, T. (2018). *If... then: Algorithmic power and politics*. Oxford University Press.
- Csernaton, R., Broeders, D., Andersen, L.H., et al. *Myth, Power, and Agency: Rethinking Artificial Intelligence, Geopolitics, and War*. *Minds & Machines* 35, 37 (2025). <https://doi.org/10.1007/s11023-025-09741-0>
- Da, M. (2025). Reconfiguring agency in the age of algorithmic control: An interactive performance lecture. In *UbiComp Companion 2025: Companion of the 2025 ACM International Joint Conference on Pervasive and Ubiquitous Computing* (pp. 1424–1427). <https://doi.org/10.1145/3714394.3756261>
- Danaher, J., Hogan, M. J., Noone, C., Kennedy, R., Behan, A., de Paor, A., Felzmann, H., Haklay, M., Khoo, S.-M., Morison, J., Schafer, B., & Shankar, K. (2017). Algorithmic governance: Developing a research agenda through the power of collective intelligence. *Big Data & Society*, 4(2), 1–21. <https://doi.org/10.1177/2053951717726554>
- Floridi, L., Cows, J., Beltrametti, M., Chatila, R., Chazerand, P., Dignum, V., Luetge, C., Madelin, R., Pagallo, U., Rossi, F., Valcke, P., & Vayena, E. (2018). AI4People—An ethical framework for a good AI society: Opportunities, risks, principles, and recommendations. *Minds and Machines*, 28(4), 689–707. <https://doi.org/10.1007/s11023-018-9482-5>
- Harari, Y. N. (2015). *Sapiens: A brief history of humankind*. Harper.
- Harari, Y. N. (2017). *Homo Deus: A brief history of tomorrow*. Vintage.
- Harari, Y. N. (2018). *21 lessons for the 21st century*. Jonathan Cape.
- Heaton, Dan; Clos, Jérémie; Fischer, Joel E.; Nichele, Elena (2023). *The Social Impact of Decision-Making Algorithms: Reviewing the Influence of Agency, Responsibility, and Accountability on Trust and Blame*. University of Lincoln. Conference contribution. <https://hdl.handle.net/10779/lincoln.25185299.v1>
- Karpova, E. A. (2025). Algorithmic Authority and Moral Responsibility: Rethinking Agency in the Age of Artificial Intelligence [in English]. *Filosofiya. Zhurnal Vysshey shkoly ekonomiki [Philosophy. Journal of the Higher School of Economics]* 9 (4), 152–166.
- Martin, M. W. (2020). Compassion with justice: Harari's assault on human rights. *Southern Journal of Philosophy*, 58(2), 264–278. <https://doi.org/10.1111/sjp.12367>
- Mittelstadt, B. D., Allo, P., Taddeo, M., Wachter, S., & Floridi, L. (2016). The ethics of algorithms: Mapping the debate. *Big Data & Society*, 3(2), 1–21. <https://doi.org/10.1177/2053951716679679>
- Munnik, R. (2019). Harari's history of tomorrow: A critique from the perspective of a philosophy of technology [Harari's geschiedenis van de toekomst: Een techniekfilosofisch commentaar]. *Tijdschrift voor Theologie*, 59(1), 64–74. <https://doi.org/10.2143/TVT.59.1.3285795>
- Pinn, A. B. (Ed.). (2019). *The Oxford handbook of humanism*. Oxford University Press.
- Pöder, J.-C. (2022). On the way towards “Homo Deus”? The transformation of humans from a theological point of view [Unterwegs zum »Homo Deus«? Die Transformation des Humanen in theologischer Sicht]. *Zeitschrift für Evangelische Ethik*, 66(2), 90–103. <https://doi.org/10.14315/zee-2022-660204>

- Romualdi, I. (2020). Verso Homo Deus. I limiti del libero arbitrio tra umanesimo, tecno-umanesimo e datismo. Per una sintesi del pensiero in Yuval Noah Harari. *Sociologia Italy*, 54(3), 118–127.
- Strawn, G. (2017). IT, Unemployment, and Ideology. *IT Professional*, 19(3), 70–72. <https://doi.org/10.1109/MITP.2017.48>
- Sued, G. E. (2023). A cultural vision of algorithms: Agency, practices, and resistance in Latin America. In *What AI can do: Strengths and limitations of artificial intelligence* (pp. xx–xx). (Edited by Manuel Cebal-Loureda, Elvira G. Rincón-Flores, and Gildardo Sanchez-Ante.) New York. (1st ed.). Chapman and Hall/CRC. <https://doi.org/10.1201/b23345>
- Ulbricht, Lena, and Katzenbach, Christian. Algorithmic governance (November 29, 2019). *Internet Policy Review*, volume 8, issue 4, 2019 [10.14763/2019.4.1424], available at SSRN: <https://ssrn.com/abstract=4850763>
- van Dijck, J. (2014). Datafication, dataism, and dataveillance: Big data between scientific paradigm and ideology. *Surveillance & Society*, 12(2), 197–208. <https://doi.org/10.24908/ss.v12i2.4776>
- van Niekerk, A. A. (2020). Building the future in the 21st century: In conversation with Yuval Noah Harari. *HTS Teologiese Studies/Theological Studies*, 76(1), 1–10. <https://doi.org/10.4102/hts.v76i1.6058>