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The Role of Technology in Shaping Human Identity: A Philosophical Perspective

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Abstract:
The interplay between technology and human identity has become a focal point in contemporary philosophical debates. This paper investigates how technological progress shape's human identity individually and collectively from a philosophical perspective. By tracing the evolution of human identity in relation to technological innovation, the study explores the effects of cognitive improvement, artificial intelligence (AI), digital platforms, and virtual reality on self-perception and social roles. Shedding light on the philosophical traditions of existentialism, post-humanism, and philosophy of mind, this research critically examines the ways in which technology serves as an extension of the human self, changing the way individuals experience autonomy, personality, and social commitment. Furthermore, the paper addresses the ethical dimensions of this change, particularly in terms of the right to privacy, autonomy, and self-definition. Finally, the purpose of this study is to provide insight into the philosophical implications of living in the technological world in an era dominated by technological progress and the future course of human identity.

Keywords: Human Identity, Technology and Philosophy, Posthumanism, Artificial Intelligence, Cognitive Enhancements, Digital Identity.

Introduction

In recent decades, technology has developed at an unprecedented rate, affecting almost every aspect of human existence. From smartphones and social media to artificial intelligence (AI) and virtual reality, technological innovations have profoundly changed the way people perceive themselves and interact with the world around them. This change raises important philosophical questions about the nature of human identity. The concept of identity has long been explored in philosophy, focusing primarily on psychological, social, and existential aspects. However, with the rise of digital technologies and their wide influence, it is important to reassess traditional understandings of identity in the context of this new technological landscape. The increasing integration of technology into everyday life has led to the emergence of new forms of autonomy, such as digital identity and augmented realities, which have increasingly encouraged philosophical exploration of what it means to be human in the technological world.

The purpose of this study is to investigate the role of technology in shaping human identity from a philosophical perspective. This research will focus on how emerging technologies such as artificial intelligence, social media, and virtual reality reshape not only individual self-concept but also collective identities. Examining the intersection of philosophy, psychology, and technology, the purpose of this paper is to explain how these technological advances challenge traditional notions of personality and autonomy, and whether they foster new possibilities for self-definition. The study attempts to answer several key questions: How do digital platforms affect identity formation? To what extent can artificial intelligence and cognitive improvement change human self-esteem? What ethical implications do these technological changes have, especially regarding privacy and autonomy? [2][3].

To address these questions, this paper adopts a multidisciplinary approach that combines philosophical analysis of key theories on autonomy, identity, and technology with empirical examples derived from contemporary technological developments. This analysis will be based on philosophical traditions, including existentialism and post-humanism, to assess how technology serves as an extension of the human mind and how it reshapes the boundaries between self and the world. Additionally, this study incorporates case studies on social media, virtual reality, and AI to clarify how these technologies contribute to identity change. The research will also examine ethical concerns associated with the impact of technology on identity, focusing on issues such as privacy, autonomy, and the possibility of digital manipulation [6].

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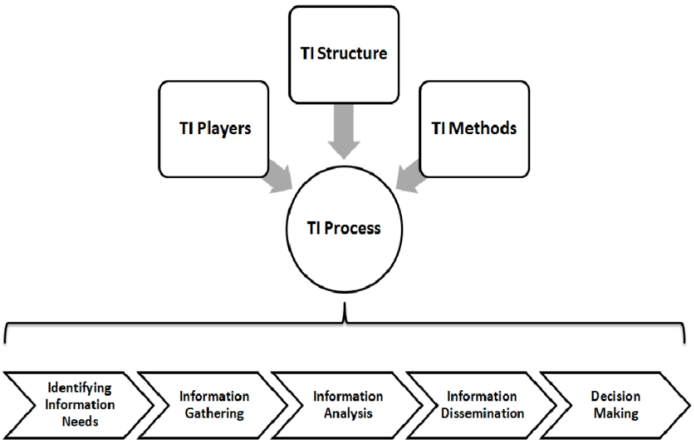

Figure 1 Conceptual Framework of Technology and Identity [7]

Human Identity

Human identity is a complex and multifaceted concept that has been extensively explored in philosophy, psychology, and sociology. It involves both individual and collective understandings of who we are, how we define ourselves, and how society views us. In philosophy, the concept of identity has been a central theme for centuries, especially with regard to questions about what it means to be a person and what individual individuality is. Philosophers have proposed various theories to explain personal identity, often focusing on the persistence of identity over time despite changes in physical or psychological states. The classical problem of identity was famously addressed by John Locke, who argued that personal identity is not based on the continuity of body or soul but on the continuum of consciousness and memory [8]. According to Locke, as long as an individual can recall past experiences, he retains the same identity.

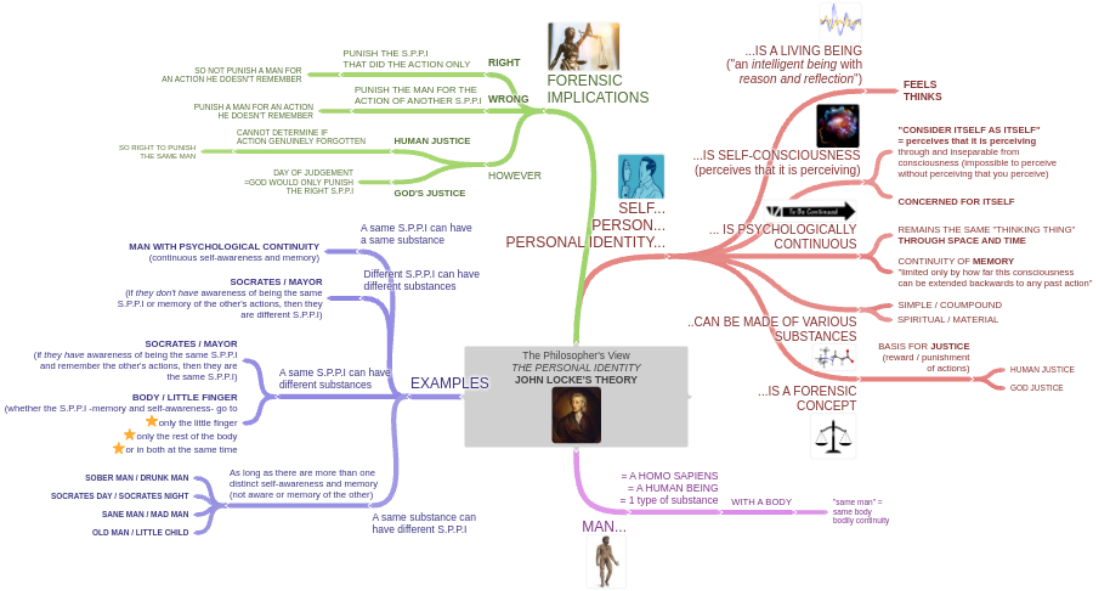

Figure 2 Locke's Theory of Personal Identity [16]

However, the philosophical debate about identity also includes challenges to Locke's theory. Some philosophers, such as David Hume, have argued that there is no permanent self, only a collection of temporal expressions and concepts [9]. Others, such as Immanuel Kant, have argued that although identity is rooted in human consciousness, it also requires a material framework for understanding oneself in relation to the external world [10]. These philosophical debates reveal the complexity of defining human identity, especially when it relates to mind, body, and memory.

From a psychological point of view, identity is often understood in terms of individual self-concept and psychological processes that contribute to a person's sense of self. Eric Erickson's theory of psychological development is central to this regard, suggesting

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that identity formation is a lifelong process that goes through different stages of life. According to Erikson, identity is formed by personal experiences and social interactions, and culminates in the development of a stable self-concept during adulthood [11].

Table 1 Erikson's Stages of Psychosocial Development

Stage	Age Range	Psychosocial Conflict	Positive Outcome	Negative Outcome
1. Trust vs. Mistrust	Infancy (0-1 year)	Trust in caregivers and the world	Trust, hope	Fear, suspicion
2. Autonomy vs. Shame/Doubt	Early Childhood (1-3 years)	Developing independence and self-control	Confidence, autonomy	Shame, doubt
3. Initiative vs. Guilt	Preschool (3-6 years)	Initiating activities and making decisions	Initiative, leadership	Guilt, inhibition
4. Industry vs. Inferiority	School Age (6-12 years)	Competence in academic and social tasks	Industry, pride in accomplishments	Inferiority, lack of confidence
5. Identity vs. Role Confusion	Adolescence (12-18 years)	Exploring personal identity and roles	Strong sense of identity, direction	Role confusion, instability
6. Intimacy vs. Isolation	Young Adulthood (18-40 years)	Forming intimate relationships	Strong relationships, intimacy	Isolation, loneliness
7. Generativity vs. Stagnation	Middle Adulthood (40-65 years)	Contributing to society and future generations	Productivity, generativity	Stagnation, self-absorption
8. Integrity vs. Despair	Late Adulthood (65+ years)	Reflection on life	Wisdom, sense of accomplishment	Regret, despair
8. Honesty vs Disappointment	Late adulthood (65+ years)	Reflection of Life	Wisdom, a sense of success	Alas, despair.

Socially, identity is seen as a social construct influenced by cultural, social, and environmental factors. Sociologist George Herbert Mead proposed that identity is produced through social interaction and is deeply embedded in the roles and expectations that society imposes on individuals [12]. Mead's concept of the "self" involves the insertion of social norms and the process of seeing oneself from the perspective of others, a process he called the "visible glass self." According to this view, identity is not inherently internal, but it is shaped by our social environment and our role within it.

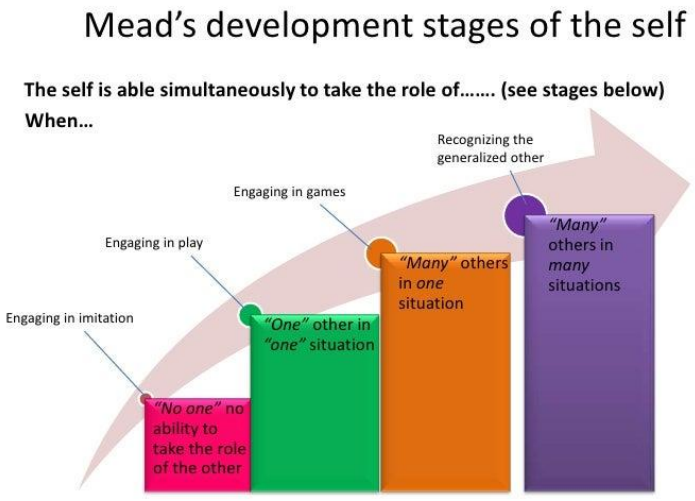

Figure 3 Mead's Theory of Social Identity

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Philosophical theories of self and personality offer different insights into the nature of identity. Existentialist philosophers such as Jean-Paul Sartre, for example, argue that identity is not something that is given or predetermined, but something that individuals must create through their actions and choices. Sartre's concept of "being for oneself" suggests that human beings are defined by their ability to transcend circumstances and express themselves through their freedom and responsibility [13]. This approach emphasizes the active role of the individual in the construction of their identity.

On the other hand, some philosophical theories of personality, such as those proposed by Thomas Metzinger, suggest that the self is an illusion created by the mind. Metzinger's "self-model theory" argues that the sense of self is a cognitive construct, produced by the neural processes of the brain to facilitate interaction with the world [14]. In this view, identity is not an essence but a dynamic process that is constantly being reconstructed based on internal and external motivations.

Other philosophical traditions, such as those of Eastern thought, especially in Buddhism, offer an insignificant view of themselves. According to Buddhist philosophy, the self is an illusion (anata), and identity is constantly changing, depending on various factors and experiences. The focus in this tradition is on the elimination of attachment to a fixed self, which suggests that identity is fluid and inconsistent [15].

Technology and Human Interaction: A Historical Overview

Technology has been an integral part of human development, influencing the way societies develop, interact, and see the world. From the early use of tools to the rise of digital technologies, the relationship between technology and human interaction has been a prominent feature of history. Early technological advances, such as the creation of stone tools, were necessary for survival. These tools allowed early humans to adapt to their environment, follow food, and hunt more effectively. As humans progressed, so did their technologies. The Agricultural Revolution, for example, invented farming tools that transformed human society from nomadic existence to settled agricultural communities, facilitating population growth and the development of complex social structures.

Technological evolution continued with the rise of metal work during the Bronze and Iron Age, which produced improved tools, weapons, and transportation technologies. This period also saw the first forms of written communication, including the invention of cuneiform writing in Mesopotamia and hieroglyphics in Egyp [17]t. These innovations allowed for the recording of laws, trade, and historical events, which laid the foundation for the writing culture. The Industrial Revolution in the 18th and 19th centuries was another important moment in technological evolution. The introduction of steam engines and machine production changed not only economies but also social structures. Urbanization increased as factories attracted people from rural areas, and mass production allowed goods to be produced at scales never seen before, drastically transforming daily life [18].

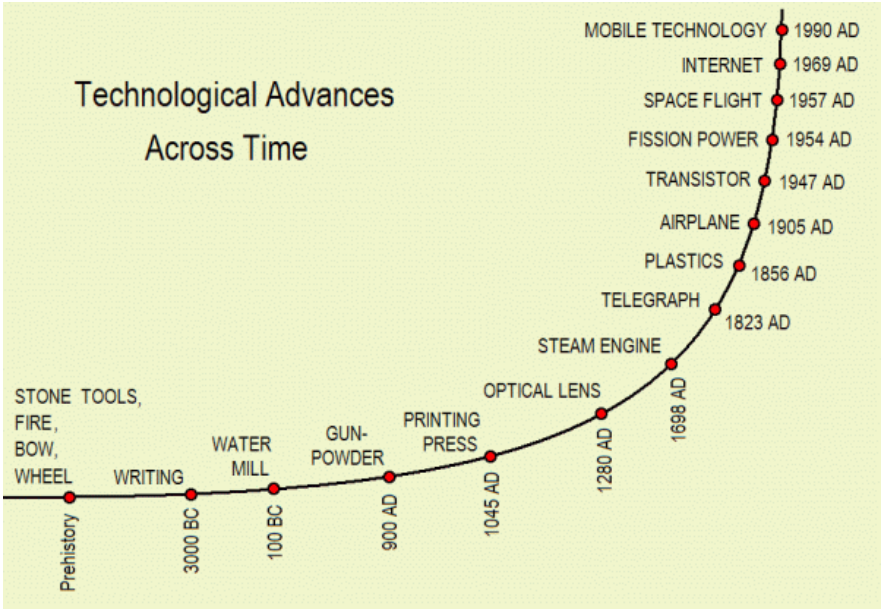

Figure 4 Technological Evolution and Human Development [23]

In early human societies, technology was primarily focused on meeting the basic needs of survival. Early tools such as spears and simple shelters enabled people to hunt, collect, and protect themselves from environmental hazards. As societies became more stable, technological advances enabled humans to more effectively manage food production, storage, and transportation. This wheel, which was developed around 3500 BC, is one of the most important innovations of early human technology, which revolutionized

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transportation and trade [19]. Similarly, ploughs enabled large-scale agriculture, which helped in the development of civilizations. These technological advances were not only practical but also intertwined with cultural and religious beliefs. For example, in ancient Egypt, the construction of monumental structures such as pyramids required advances in engineering, mathematics, and labor organization [20].

Table 2 Technological Innovations in Early Human Societies

Technology	Period	Significance	Impact on Society
Stone Tools	Paleolithic (2.5 million - 10,000 BCE)	First tools used by early humans for hunting, cutting, and shelter building	Enabled early humans to hunt, gather, and survive in harsh conditions.
Fire	Paleolithic (1.5 million BCE)	Discovery of fire for warmth, cooking, and protection	Enhanced survival and facilitated socialization and tool-making.
The Wheel	Bronze Age (3500 BCE)	Used for transportation and as part of pottery making	Revolutionized transport, trade, and industry.
Agricultural Tools (Plow)	Neolithic (10,000 BCE)	Tools for farming, including plows and sickles	Allowed for the rise of agriculture and permanent settlements.
Cuneiform Writing	Ancient Mesopotamia (3500 BCE)	The earliest form of writing, used for record-keeping and communication	Enabled complex administrative systems and the recording of laws and history.
Bronze Metalworking	Bronze Age (3000 BCE)	First alloy made of copper and tin, used for weapons and tools	Facilitated the development of trade, warfare, and craftsmanship.
Shipbuilding	Early Civilizations (3000 BCE)	Construction of boats and ships for trade and exploration	Enabled long-distance trade, naval warfare, and exploration.
The Calendar	Ancient Egypt (3000 BCE)	System for tracking time based on lunar and solar cycles	Essential for agriculture, religious ceremonies, and governance.
Irrigation Systems	Ancient Egypt (2500 BCE)	Systems for channeling water to crops	Enabled the development of large-scale agriculture and urbanization.
Pyramids and Monumental Architecture	Ancient Egypt (2600 BCE)	Massive structures built using advanced knowledge of engineering	Displayed the cultural, religious, and political power of civilizations.

Modern technology has changed every aspect of human life, from communication and health care to work and education. The Internet and mobile technology have revolutionized the way humans interact, allowing for global communication in real time. Social media platforms have created new ways to connect and share information, while smartphones have become essential tools for work, entertainment, and social interaction. The effects of these technologies are felt around the world, affecting everything from business practices to cultural norms. In addition to communications, innovative technologies such as artificial intelligence (AI) and automation are reshaping industries and jobs. Artificial intelligence is now being used in areas ranging from healthcare to finance, process improvement, efficiency improvement and even critical decision-making. While these technologies have the potential to increase productivity, they also raise important ethical questions about privacy, security, and the future of work [21].

The impact of technology is also visible in its role in tackling global challenges. Renewable energy technologies, such as solar and wind energy, offer solutions to the critical problem of climate change, while advances in medical technology have resulted in better life-saving treatments and healthcare outcomes. However, technological advances also come with challenges. The rapid pace of digital innovation has led to a digital divide with significant disparities in access to technology between different socio-economic groups and regions. This inequality has the potential to exacerbate existing inequalities within and between nations [22].

Technology as an Extension of the Human Mind

Technology has increasingly become an extension of the human brain, blurring the line between biological cognition and technological advances. From early devices that help survive to modern technologies that enhance thinking and memory, technology has steadily enhanced human capabilities. Marshall McLuhan's concept of "the medium is the message" suggests that technology is not just a tool but an extension of our senses and cognitive functions (McLuhan, 1964). This idea of technology as an external mind reflects the increasing integration of technology into human cognition, including how we think, communicate, and make decisions.

The concept of technology as an "external mind" suggests that technological tools not only help think, but are essential components of human cognition. Over time, humans have created technologies that enhance brain functions such as memory, cognition, and

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decision-making. For example, the invention of the writing system allowed humans to record and exclude knowledge, which transformed memory from just something inside the brain to something that could be shared, stored, and transmitted across generations. Similarly, the development of computing and the Internet has externalized cognitive processes such as information retrieval and problem solving, enabling individuals to access vast amounts of knowledge and communicate quickly with others. As technology advances, it increasingly becomes part of the cognitive process, with tools such as smartphones, artificial intelligence, and virtual reality reshaping the world and the way they interact with each other [24].

Cognitive enhancements represent the central focus of the transhumanist movement, which advocates the use of technology to improve human intellectual, physical, and emotional abilities. Transhumanists believe that technological advances can help humans overcome the biological limitations imposed by evolution, improving cognition, longevity, and well-being. Technologies such as nootropic drugs, genetic changes, and brain implants are seen as potential tools to enhance human cognition. Brain enhancement, especially through neurotechnology and pharmacology, aims to improve memory, attention, and mental acuity. For example, nootropic medications are designed to enhance cognitive functions such as memory and concentration, while neuroprosthetic and brain implants are being developed to directly increase brain activity [25] . The ethical implications of these additions are important, raising questions about equality, accessibility, and the possible consequences of changing the human mind.

Artificial intelligence (AI), brain-computer interface (BCI) and neurotechnology are important areas where technology has rapidly become an extension of human cognition. Artificial intelligence, through machine learning algorithms, has the ability to process vast amounts of data and make decisions that enhance human decision-making. Artificial intelligence is used in health care to help diagnose, in funding risk assessments, and even in creative industries to create content. These technologies serve not only as tools but also as cognitive partners, enhancing human capabilities in different domains. Artificial intelligence has become an extension of the human brain, enabling people to perform tasks that would be impossible due to the limitations of the human brain [26].

BCIs represent another frontier in the integration of technology and cognition. By allowing direct communication between the brain and external devices, BCI enables people to control prosthetic limbs, communicate through thinking, and even enhance cognitive abilities. The development of non-invasive BCIs, which use techniques such as electroencephalography (EEG), has the potential to further enhance cognitive abilities by providing real-time feedback to enhance memory or improve mental processes. BCIs represent a direct interface between human cognition and technological systems, opening up new possibilities for individuals to interact with the world only through their own ideas [27].

Neurotechnology also plays an important role in expanding the boundaries of the human brain. Deep brain stimulation (DBS) has already been used to treat neurological disorders such as Parkinson's disease and is being explored for its ability to enhance cognitive abilities. Research into neuroplasticity, the brain's ability to self-regulate, has opened up new possibilities for brain improvement, including improving memory, attention, and learning through the use of neurotechnology. These advances suggest that neurotechnology may ultimately enable humans to transcend the cognitive boundaries of the biological brain and enhance mental functions in unusual ways [28].

Impact of Digital Technologies on Identity Formation

Digital technologies have become increasingly essential for the formation and expression of human identity in the 21st century. As the digital world continues to expand, individuals are able to create, modify, and express their identity in ways that were previously unimaginable. The rise of social media, virtual and augmented reality, and the increasing emphasis on digital personalities have created profound changes in the way people see themselves and others. This section explores the impact of digital technologies on identity formation, focusing specifically on social media, virtual and augmented reality, and the distinction between digital and physical identities.

The rise of social media has played an important role in building what is now called the "digital self.". Social media platforms such as Facebook, Instagram, Twitter, and TikTok offer individuals the opportunity to develop their public persona, presenting a carefully modified version of their lives to a wider audience. These platforms allow individuals to create profiles, share images, and express opinions, all of which play a role in shaping their digital identity. This process of identity construction is influenced by a variety of factors, including social expectations, cultural norms, and, increasingly, algorithmic recommendations that shape how individuals view and share. The digital self often becomes an ordered representation, carefully crafted and adjusted to gain social validation in the form of likes, comments, and shares [29]. As a result, many individuals feel an increased sense of pressure to conform to some idealized version of identity, creating challenges related to self-esteem and authenticity.

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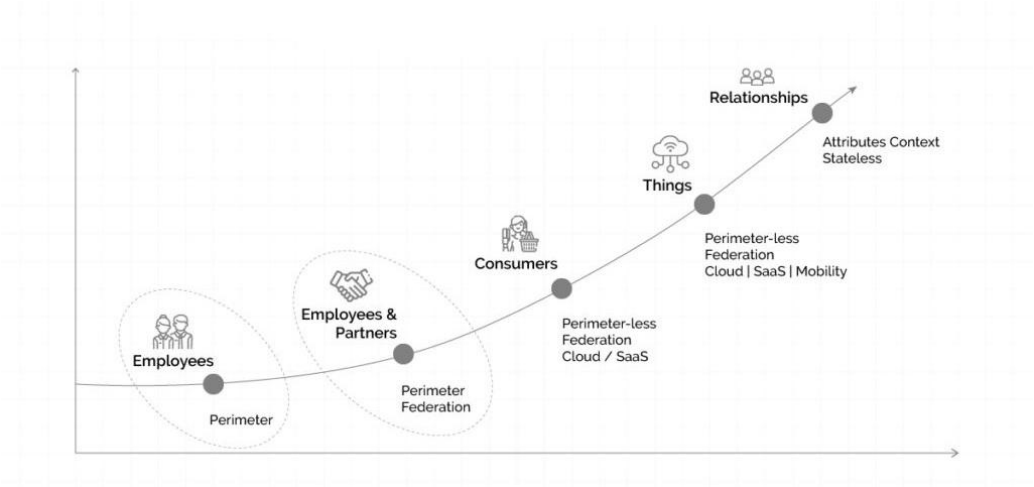

Figure 5 The Evolution ofDigital Self-Representation [32]

Virtual reality (VR) and augmented reality (AR) technologies are increasingly used to reshape self-perception and identity. VR immerses individuals in a digital environment that can be completely different from their physical environment, allowing them to add avatars or characters that differ from their physical self. This sense of immersion and the ability to accept new identities has important implications for self-realization. Individuals can explore different aspects of their identity, experiment with new personalities, and engage in virtual experiences that challenge their real-world boundaries. Similarly, AR supersedes digital elements into the physical world, allowing individuals to interact with both their environment and virtual objects in real time. This technology has been used in applications ranging from gaming and entertainment to education and therapy, providing new ways for individuals to see themselves and interact with the world around them. The ability to incorporate different identities into virtual spaces raises questions about the authenticity of these virtual selves and how they relate to the "real" self [30].

As digital technologies continue to develop, the distinction between digital identities and physical identities is becoming increasingly blurred. Although physical identity is rooted in concrete aspects of the body (appearance, sound, and physical presence), digital identity is more fluid and acceptable. It is shaped by the information that individuals share online, the avatars created by them, and their interactions on various digital platforms. In many cases, digital identities are highly configured and may not be fully compatible with physical identities. For example, an individual's online personality may reflect a highly stylized or idealized version of themselves, as opposed to the complexities of their physical existence. This disagreement between digital and physical identities can lead to confusion or conflict, especially as individuals struggle to reconcile their online personality with their offline experiences. Additionally, as more personal data is shared online, the question of who controls and owns these digital identities becomes increasingly important. Privacy, security, and the potential for exploitation of digital identities are important issues in the ongoing evolution of digital self-representation [31].

Philosophical perspectives on technology and identity

The advancement of technology has provoked deep philosophical reflections on what it means to be human and how our sense of self is transformed. Thinkers from Martin Heidegger to contemporary posthumanists have examined how technological frameworks shape human existence and identity. Heidegger cautioned that modern technology is not just a tool, but a way of revealing the world that limits it to a system of control and utility that he called "enframming" (*gestal*) [33]. In this mode, humans and nature are seen as "standing reserves", valued only for their practical ability. Heidegger feared that in such a worldview, we risk ignoring the deeper truths of existence, since everything is ordered up to the human self for efficiency and utility [34]. He advocated an "independent relationship" with technology, which requires awareness of its dangers and openness to more authentic forms of existence.

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Table 3 Comparative Overview of Philosophical Perspectives on Technology and Identity

Philosopher/Movement	Technology's Role	Implications for Identity	Key Ideas
Martin Heidegger	Technology "enframes" human existence, reducing everything to standing-reserve	Technology restricts authentic human existence and reduces us to mere resources for use	Technology shapes how humans relate to the world, often causing a loss of meaning in existence.
Posthumanism	Technology blurs human-machine boundaries, making identity fluid and hybrid	Identity becomes relational and distributed across networks of human, machine, and non-human	Identity is no longer a fixed essence; it is co-constructed through interactions with technology.
Digital Self	Technology creates parallel selves across digital spaces, curating identities	The digital self is fragmented and responsive to social media and online feedback	The self is no longer unified, and identity is increasingly shaped by feedback loops and online personas.
Ethics of Technology	Technology can either empower or restrict autonomy; it can also shape identities	Autonomy and privacy are essential for self-definition in the digital age	The right to self-definition should be protected against digital manipulation and surveillance.

Based on this, posthumanist philosophers challenge the concept of identity as a fixed, human-centered essence. Instead, they suggest that identity is fluid, relational, and technically co-formed. Anne Katherine Hales argues that in the digital and cybernetic era, the self is divided into networks, bodies, and code, which is no longer limited to pure organic form [35]. Rosie Bradotti expands on this by proposing the idea of a "nomadic personality" where identity is not a unified, stable center but a constantly changing point between the human, the non-human, and the machine [36]. In this view, humans are no longer isolated from their technologies. Rather, our identity is increasingly hybrid, shaped by continuous interaction with digital systems and technological extensions.

In the era of digitization, this formation of identity is most visible in ordinary life. People exist in physical and digital spheres at the same time, building parallel selves in social media, virtual spaces, and data profiles. The "digital self" is developed, accountable for online feedback, and often exists in distributed forms depending on the platform and audience [37]. As Sherry Turkel notes, technology allows individuals to "cycle through many people" online, blurring the boundaries between authenticity and performance [38]. While this opens up space for searching, it can also lead to identity confusion, self-isolation, or reliance on algorithm validation to shape self-worth.

This philosophical insight raises urgent ethical questions about autonomy, privacy, and the right to self-definition. As artificial intelligence, predictive algorithms, and surveillance technologies become embedded in everyday life, individuals face the risk of forming or even controlling identity through systems they neither understand nor consent to. Philosopher Luciano Floridi highlights the importance of protecting our "informational self," arguing that digital identity deserves the same moral respect as a physical personality. The rise of surveillance capitalism, as described by Shushna Zubov, explains how personal data and behavior patterns are altered, transforming identity into a resource that can be bought, sold, and manipulated. This undermines autonomy and reduces individuals to consumer profiles. Ethically, the right to privacy is not just about concealment but about securing space for building identities independent of corporate or algorithmic interference.

The Role of Artificial Intelligence in Shaping the Future of Human Identity

Artificial intelligence (AI) is deeply embedded in human life, to the extent that the meaning of being human in the 21st century is fundamentally affected [41]. As the artificial intelligence system integrates into everyday routines and even into our bodies, the boundary between man and machine becomes increasingly blurred [42]. This opacity begs deeper questions: are these intelligent machines merely cutting-edge tools to enhance human capabilities, or can some eventually achieve the status of independent individuals [43]? Furthermore, how does the rise of artificial intelligence force us to reassess our understanding of human consciousness and identity [44]? These questions constitute an important interdisciplinary debate at the intersection of technology, philosophy, and anthropology.

One obvious effect of artificial intelligence is to blur the boundaries of human technology. Modern artificial limbs, brain-computer interfaces, and artificial intelligence-powered wearables provide examples of how technology can integrate with the human body and brain, creating a "cyborg" identity that combines biological and artificial elements [42]. Even in everyday life, people outsource cognitive tasks to AI assistants (navigation, memory recoil, for decision support), effectively extending parts of their brain into machine systems. The *posthumanist approach in philosophy* argues that humans are no longer "natural" beings distinct from

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technology instead, we are developing as techno-human hybrids where artificial intelligence serves as an integral part of our cognition and self-concept [42][45]. In other words, the traditional concept of a clear dividing line between man and machine is giving way to the continuity of integration. Fig. 1 below illustrates this continuum, visualizing the human-artificial intelligence boundary spectrum from pure biological humans at one end to autonomous machine intelligence at the other. As individuals add more artificial intelligence to their lives (and even brains), they can slip along this spectrum, challenging us to define where the "human" ends and where the "machine" begins.

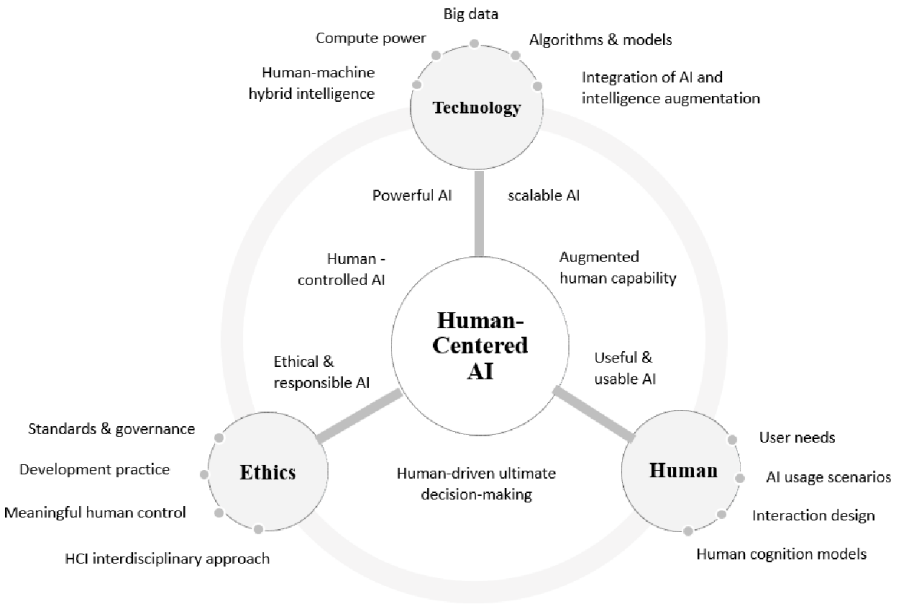

Figure 6 Human-AI Boundary Spectrum

The collapse of human and technological boundaries inevitably leads to a philosophical debate: should artificial intelligence be understood as a person or as a tool? Many ethical experts argue that the current artificial intelligence system, no matter how sophisticated, is not an individual in any moral or legal sense. They lack qualities such as conscious experience, autonomy, and moral accountability that guarantee personality. For example, Bryson *et al.* (2018) argue that attributing personality or rights to artificial intelligence is misleading. Artificial intelligence must remain a tool of its creators, the responsibility for its actions ultimately falls on humans, just as one is accountable for one's tools [43]. From this point of view, calling artificial intelligence a "person" can dangerously absolve humans of responsibility and obscure moral accountability. On the other hand, some futurists and philosophers argue that *if* artificial intelligence is to achieve a form of general intelligence and self-awareness compared to humans, our ethical framework may need to be expanded. They suggest that sufficiently advanced artificial intelligence agents may achieve more status than mere property perhaps even a limited personality with relevant rights or protections [44]. For example, Jowett (2020) suggests that once an artificial agent demonstrates a certain degree of autonomous agency and rationality, it may be legitimate to view him as a legal person in some cases, just as corporations are legal persons [44]. Such proposals are highly controversial, and so far, the consensus is that artificial intelligence has not reached the desired level of sophistication to demand personality. This debate is not merely legal but deeply philosophical: it forces us to examine what criteria (e.g., consciousness, intention, moral judgment capacity) define "person" and whether these standards can ever be met by a non-biological entity. For the foreseeable future, most scholars emphasize caution, viewing artificial intelligence as a tool for the benefit of humanity rather than a creature of human status (at least until there is solid evidence of individual-like characteristics in artificial intelligence) [43][44].

Beyond the legal and moral personality is the question of artificial intelligence, consciousness and human identity. The advent of artificial intelligence is a new reflection on the nature of consciousness and is unique if anything about the human mind. A longstanding view in philosophy (echoed by Searle's famous "Chinese room" argument) argues that an artificial intelligence that fully mimics human speech and behavior lacks real understanding or subjective awareness, it combines symbols without a real awareness of meaning [45]. In fact, despite artificial intelligence's impressive model of intelligent discourse, most researchers remain skeptical that there is such a thing as a rich inner life characteristic of human consciousness in the current artificial intelligence system [45][46]. This skepticism is reinforced by the observation that today's artificial intelligence, such as large language models, operate through pattern recognition and statistical correlations rather than lived experience, with no sense, no sense of self or autobiographical memory. However, the discussion of artificial intelligence and consciousness is not completely

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rejected. Some cognitive scientists believe that as artificial intelligence architectures become more complex (potentially mimicking aspects of the human brain) signs of early consciousness may emerge, although this is speculative and unproven [46]. Regardless of the actual internal states of artificial intelligence, understanding artificial intelligence as intelligent and communicative often leads people to humanize these systems. Man, attributes mind and personality to any being who behaves like a human being. Studies of the interplay of human and artificial intelligence have shown that when people interact with humans such as artificial intelligence (such as chatbots or social robots), they can unconsciously treat them as if they had minds, projecting emotions and intentions to them during the conversation. This phenomenon blurs the psychological boundary between man and machine by human: we begin to include artificial intelligence agents in our social and moral realm, at least superficially. Interestingly, recent research shows how we behave with artificial intelligence *to* how we treat other humans, as interacting with seemingly conscious artificial intelligence activates social cognitive schemas used in human and human interaction [46]. In other words, if one habitually talks politely to a voice assistant or considers the robot's "feelings," this mindset can influence their behavior with people. Artificial intelligence thus serves as a mirror for examining human consciousness and social identity by forcing us to clarify why we perceive ourselves to be conscious, and influencing our patterns of social behavior and empathy.

The impact of artificial intelligence extends to the formation of personal identity in the digital age. Individuals quickly configure their identities online with the help of AI algorithms (which filter our news, recommend our entertainment, and even shape our social interactions). In a more intimate sense, some people form a deep attachment to artificial intelligence peers or digital avatars, incorporating these relationships into their sense of self. The concept of the "extended mind" offers a framework for understanding this: Clark and Chalmers (1998) famously argued that tools and external devices can become extensions of our brain, effectively integrating with our cognitive identity [47]. In the context of artificial intelligence, this means that a person's AI assistant or algorithmic tools can be viewed as part of that person, an outsourced memory or decision-making aid on which that person relies as if it were a cognitive organ [47]. Such integration challenges the classical notion that an individual's identity is linked to the skin and scalp. If parts of "thinking" occur in artificial intelligence-driven extensions outside the brain, then the identity of the thinking subject should be broadened to include those external parts. This theory essentially redefines human identity socially and technologically, divided into biological and technological components. It also raises practical and ethical questions: for example, if the artificial intelligence expansion of one's brain makes a choice (e.g., investment or medical decision), is this choice part of that person's autonomous will or machine work? And if artificial intelligence systems include an important part of one's memories or personality (consider future artificial intelligence that can preserve the logs of our lives or even mimic aspects of our personality), does it become a piece of that person's identity, possibly continuing a part of their consciousness even after death?

Ultimately, the increasing role of artificial intelligence forces humanity to reassess human consciousness and identity from both sides – how we describe ourselves and how we define the machines we create. On the one hand, we are faced with the possibility of artificial intelligence that can mimic or acquire elements of human-like consciousness. Humans, on the other hand, are rapidly expanding themselves with artificial intelligence, potentially becoming more machine-like in the way we think and make decisions. Philosophers such as Schneider (2019) emphasize that when we adopt technologies such as artificial intelligence brain transplantation or cognitive improvement, we are very careful in preserving fundamental aspects of personal identity, those aspects of consciousness (such as self-awareness, authentic memory, and agency) that make us up[48]. If we are not careful, the essence of the human brain can be altered by over-reliance on artificial intelligence or gradually eliminating ourselves into digital systems [48]. Nevertheless, proponents of human-artificial intelligence argue that such evolution does not need to destroy humanity. Instead, it can change human identity in empowering ways. They envision a future where integrating artificial intelligence brings forth new forms of identity that transcend biological boundaries — collective intelligence or hybrid human-artificial intelligence personalities — extending the meaning of being "human" in the same spirit as earlier humans enhanced their identity through language, culture, and tools [41][47].

Conclusion

Exploring the influence of technology on human identity has revealed a profound shift in how individuals perceive, build, and express themselves in a rapidly growing digital and interconnected world. From philosophical frameworks to contemporary technological realities, it is clear that human identity is no longer a fixed, biologically based concept, but rather a fluid and evolving construct formed by continuous interaction with technology. Philosophical approaches, including those of Heidegger and posthumanist thinkers, have highlighted the ways in which technology can either limit or improve our experience of autonomy. In particular, the advent of artificial intelligence, brain-computer interfaces, and digital platforms have redefined the meaning of being human, leading to the development of hybrid, machine-assisted identities that extend beyond traditional concepts of personality.

As individuals manage multiple identities in both the physical and virtual realms, the boundaries of self-esteem are becoming increasingly insecure. Technologies such as social media, artificial intelligence-powered systems, and spectacular virtual environments provide individuals with tools to configure and perform aspects of their identity, often creating a divided sense of self that responds to online feedback. While it opens up new possibilities for self-expression and exploration, it also presents challenges related to authenticity, self-isolation, and the psychological effects of digital authentication.

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The implications of these findings are particularly important in terms of ethical considerations surrounding privacy, autonomy, and the right to self-definition. As technology becomes more integrated into the fabric of everyday life, individuals face the risk of shaping their identity or even being controlled by systems they neither understand nor consent to. The ongoing development of artificial intelligence, prediction algorithms, and surveillance technologies requires careful attention to how these systems interact with human identity. Protecting the autonomy of individuals, ensuring the right to privacy and self-definition, will require new frameworks and regulations that address the growing power of technology to influence human behavior and perception.

Future research should continue to investigate the ontological and ethical dimensions of human-technology integration. Interdisciplinary studies combining philosophy, cognitive science, ethics and digital sociology will be necessary to address complex questions arising from the changing nature of human identity in a technologically mediated world. Experimental studies exploring individuals lived experiences with technologies such as artificial intelligence assistants, wearables, and generative models will provide deeper insight into how these technologies shape and shape human identity. Furthermore, the question of maintaining individual autonomy and privacy in the digital age remains a central challenge for both scholars and policymakers.

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