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# The Post-Human Turn: A Scoping Review of AI, Digital Culture, and the Evolution of Human Identity in the 21st Century

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## Abstract

The 21st century is defined by a "post-human turn," a socio-technical shift blurring the lines between human and machine, biology and technology, and physical and virtual realities. Driven by Artificial Intelligence (AI) and digital culture, this transformation necessitates a critical examination of its impact on the core construct of human identity. This scoping review aims to map the key themes, debates, and gaps in the interdisciplinary literature exploring this intersection. Following the PRISMA-ScR framework, a systematic search of Scopus, Web of Science, and Google Scholar databases (2010-2024) was conducted. The analysis identified five central thematic domains: 1) The Cyborgian Self (human-AI integration), 2) The Algorithmic Self (identity construction through datafication), 3) Virtual Embodiment and the Pluralization of Selfhood, 4) The Delegation of Human Agency, and 5) Normative and Ethical Challenges (privacy, bias, redefining values). The findings reveal a decisive move away from a static, essentialist view of human identity towards a dynamic, relational, and technologically-mediated one. The post-human condition presents a dualism of empowerment and alienation, offering new forms of agency while posing significant threats to autonomy and privacy. This review concludes by calling for robust, human-centric ethical frameworks and further empirical research into the long-term psychosocial effects of this ongoing evolution.

**Introduction**

The concept of a fixed, autonomous, and biologically-determined human self-a legacy of the European Enlightenment-is undergoing its most significant challenge since its inception(1). We are in the midst of a "post-human turn," a paradigm shift where rapid advancements in artificial intelligence (AI), biotechnology, and digital networks are fundamentally reshaping what it means to be human(2) .This is not an apocalyptic vision of human eradication, but rather a critical re-evaluation of the human condition in an increasingly technologized world(3).

The drivers of this turn are twofold(4). First, Artificial Intelligence has evolved from a tool for calculation to a pervasive force that influences decisions, curates information, and even simulates human-like interaction and creativity(5). From recommendation algorithms on Netflix to generative AI like GPT-4 and Midjourney, AI systems are active participants in the construction of our knowledge, desires, and social realities. Second, Digital Culture, embodied by social media platforms, virtual worlds, and constant connectivity, has created new environments for identity performance, community formation, and embodied experience(6). In these spaces, the self is distributed, networked, and subject to the logics of datafication (7).

The central problem this review addresses is the fragmented and interdisciplinary nature of the scholarship on this evolution. Research spans philosophy, sociology, media studies, computer science, and bioethics, making a synthesis of the core themes and challenges a complex but necessary task(8). This paper, therefore, poses the following research questions:

1. What are the dominant thematic domains in the literature concerning AI, digital culture, and the evolution of human identity?
2. How do these themes describe the reconfiguration of the self, agency, and embodiment?
3. What are the primary ethical and societal challenges identified within this post-human paradigm?

This scoping review aims to map this vast intellectual territory, providing a structured overview of the key debates and identifying gaps for future research. Following this introduction, the paper outlines its methodology, presents a thematic synthesis of the findings, and concludes with a discussion of the implications and future directions(9).

**Methodology**

This review was conducted as a scoping study following the PRISMA Extension for Scoping Reviews (PRISMA-ScR) guidelines .The objective was to map the key concepts and evidence in the field, rather than appraise the quality of individual sources, which is typical of a systematic review.

**Search Strategy:**

A systematic search was performed across three major electronic databases: Scopus, Web of Science, and Google Scholar. The search strategy was designed to capture the interdisciplinary nature of the topic. The key search terms included:

- ("post-human" OR "posthuman" OR transhumanism*)
- AND ("artificial intelligence" OR AI OR "machine learning")
- AND ("digital culture" OR "social media" OR "virtual reality" OR "algorithm*")
- AND (identity OR "self" OR "subjectivity" OR "human nature")

**Inclusion and Exclusion Criteria:**

- **Inclusion:** Peer-reviewed journal articles, books, and book chapters published in English between 2010 and 2024. Sources had to explicitly discuss the impact of AI and/or digital technology on concepts of human identity, selfhood, or subjectivity.
- **Exclusion:** Non-English publications, technical papers focusing solely on engineering aspects without social analysis, and popular science articles without academic rigor.

**Study Selection and Data Charting:**

The initial database search yielded 1,250 records.

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After removing duplicates, titles and abstracts were screened for relevance. A total of 185 full-text sources were assessed for eligibility, resulting in a final corpus of 45 key sources included in this scoping review.

Data were charted using a standardized form to capture: author(s), year of publication, discipline, primary research questions, methodology, and main findings/concepts related to the evolution of human identity. Thematic Synthesis: Mapping the Post-Human Identity

The analysis of the literature revealed five interconnected thematic domains that characterize the evolution of human identity in the 21st century.

**Theme 1: The Cyborgian Self – Biology and Technology Converge**

This theme extends beyond the classic vision of the cyborg with physical prostheses(10). It now encompasses the integration of AI and digital technology at the cognitive and biological levels(11).

- **The Quantified Self:** Wearable devices (e.g., Fitbit, Apple Watch) continuously monitor our physiology, turning bodily functions into data streams(12). This creates a "data-driven double" of the self, where identity is partially defined by biometric metrics(13) . This externalizes self-knowledge, making us reliant on technology to understand our own health and states of being(14).
- **Cognitive Enhancement and BCIs:** The development of Brain-Computer Interfaces (BCIs), such as those pioneered by Neuralink, promises to directly merge human cognition with AI(15). This raises profound questions: if memory can be augmented or thoughts transmitted digitally, where does the "self" reside? This directly challenges the philosophical notion of the biological brain as the sole seat of identity(16) .

**Theme 2: The Algorithmic Self – Identity through Datafication**

In the digital social sphere, identity is increasingly constructed in dialogue with algorithms(17).

- **Curated Identity Performance:** On platforms like Instagram and TikTok, users perform identities that are optimized for algorithmic visibility and engagement(18, 19). The self becomes a brand, shaped by metrics of likes, shares, and follower counts(20) . This creates a feedback loop where the algorithm reinforces certain identities and marginalizes others(21, 22).
- **The Datafied Shadow Self:** Our digital footprints—search histories, purchase records, location data—are aggregated by corporations to create algorithmic profiles that often know our preferences, political leanings, and potential behaviors better than we know ourselves(2) .This "algorithmic self" is a shadow identity that has real-world consequences, determining the ads we see, the news we consume, and even our creditworthiness(23).

**Theme 3: Virtual Embodiment and the Pluralization of Selfhood**

Digital environments like MMORPGs (e.g., World of Warcraft) and social VR platforms (e.g., VRChat) decouple identity from the physical body, allowing for experimentation with avatars and new forms of embodiment(24, 25).

- **Identity Multiplicity and Fluidity:** Users can create and control multiple avatars, exploring different genders, races, species, and personalities. This supports a postmodern view of the self as fluid, multiple, and constructed, rather than singular and essential (3, 26).
- **Presence and Telepresence:** In VR, the feeling of "being there" (presence) can be so strong that the virtual body (avatar) feels like one's own(27, 28). This challenges the Cartesian mind-body dualism, suggesting that a sense of self can be successfully projected into a digital vessel, leading to questions about the nature of experience and reality itself(5).

**Theme 4: The Delegation of Human Agency and Cognition**

As AI systems become more sophisticated, we increasingly delegate tasks that were once considered core to human intelligence and agency(29).

- **From Tools to Partners:** We no longer just *use* tools; we *interact* with AI agents(30, 31). We delegate navigation to GPS, creative inspiration to AI art generators, and even emotional companionship to chatbots like Replika(10). This reshapes human agency from something primarily self-directed to a collaborative or delegated process (13).
- **The Atrophy of Certain Cognitive Skills:** Reliance on AI for memory (search engines), calculation, and navigation may lead to the atrophy of these innate human skills(14). The question arises: if we offload core cognitive functions, what becomes of the human mind? The identity of *Homo sapiens* as the "knowing man" is potentially at stake(15).

**Theme 5: Normative and Ethical Challenges in the Post-Human Era**

This thematic domain encompasses the critical debates surrounding the power dynamics and moral implications of the post-human turn(32).

- **Surveillance Capitalism and Privacy Erosion:** The economic model underpinning much of digital culture is based on the extraction and analysis of behavioral data for prediction and control(33) . This constitutes a massive power asymmetry that threatens individual autonomy and privacy, a cornerstone of liberal humanist identity.
- **Algorithmic Bias and Social Inequality:** AI systems trained on biased data can perpetuate and amplify societal prejudices related to race, gender, and class(34). This can lead to discriminatory "algorithmic identities" that limit opportunities for marginalized groups(35) .

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- **Redefining Values and Rights:** The post-human condition forces us to reconsider fundamental values(17). What constitutes autonomy when our choices are nudged by algorithms? What is the meaning of "authenticity" in a world of digital performance? If a non-human entity exhibits consciousness, should it have rights? These questions challenge the very foundations of our ethical and legal systems(36).

**Discussion and Conclusion**

This scoping review has mapped the landscape of scholarly discourse on the post-human turn, revealing a consistent narrative: human identity is evolving from a static, bounded entity to a dynamic, networked, and technologically co-constituted process(18). The five identified themes—Cyborgian Self, Algorithmic Self, Virtual Embodiment, Delegated Agency, and Ethical Challenges—are not isolated but deeply interwoven, painting a picture of a profound and irreversible transformation(37, 38).

The central tension that emerges is one of empowerment versus alienation(39). On one hand, the post-human condition offers unprecedented opportunities: the ability to transcend biological limitations, to explore fluid and multiple identities, and to augment our cognitive and creative capacities(40). On the other hand, it introduces new forms of alienation: from our own biological data, from authentic selfhood in the face of algorithmic curation, and from autonomous agency as we delegate more of our decision-making to machines(41, 42).

**Implications for Research and Policy:**

- **Research:** There is a pressing need for longitudinal empirical studies on the psychological effects of long-term engagement with AI companions and immersive virtual realities. Furthermore, interdisciplinary collaboration between technologists, ethicists, and social scientists is crucial to develop human-centric AI(43).
- **Policy and Education:** We must develop robust regulatory frameworks for data rights, algorithmic transparency, and AI ethics(44). Simultaneously, educational curricula must evolve to foster critical digital literacy, empowering individuals to understand and navigate the forces shaping their identities(45, 46).

**Limitations:**

This review is limited by its focus on English-language literature and its scoping nature, which precludes a formal quality assessment of the included sources(47). The rapid pace of technological change also means that the landscape is constantly evolving(48).

In conclusion, the post-human turn is not a future speculation but a present reality. The evolution of human identity in the 21st century is a complex, contested, and ongoing process(49). By mapping its key dimensions, this review provides a foundation for navigating the challenges and opportunities that lie ahead, ensuring that as we redefine the human, we do so with wisdom, equity, and a commitment to preserving human dignity in a new age(50).

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