THE IMPACT OF ARTIFICIAL INTELLIGENCE ON HUMAN WORLDVIEW

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Abstract: The rapid proliferation of artificial intelligence systems — encompassing machine learning, natural language processing, generative AI, and autonomous decision-making technologies — is exerting a profound and multidimensional influence on human worldview: the integrated network of beliefs, values, cognitive frameworks, and ontological commitments through which individuals interpret reality, assign meaning, and orient action. This article investigates the mechanisms through which AI shapes human worldview across three interrelated dimensions: cognitive, encompassing changes in information processing, attention, memory, and epistemic practices; axiological, encompassing transformations in values, moral intuitions, and conceptions of human uniqueness and dignity; and societal, encompassing shifts in trust, authority, social relationships, and democratic participation.

Keywords: artificial intelligence, worldview, cognitive impact, epistemic change, AI literacy, digital transformation, moral philosophy, human-AI interaction, social cognition, technological determinism.

Introduction. The term “worldview” (German: Weltanschauung) designates the comprehensive system of fundamental assumptions, beliefs, and values through which a person or community constructs, interprets, and orients itself within reality

[1]. It encompasses ontological commitments concerning the nature of existence; epistemological frameworks governing what constitutes valid knowledge and how it is acquired; axiological orientations defining what is considered valuable, beautiful, and morally right; and teleological narratives providing meaning and purpose to individual and collective life. The formation of worldview is a lifelong developmental process shaped by education, culture, social relationships, and increasingly the technologies through which individuals interact with information and with each other.

Artificial intelligence represents perhaps the most consequential technological development in the current period for the formation and transformation of human worldview. Unlike previous information technologies the printing press, radio, television, the internet AI systems do not merely transmit or organise human-created content; they generate novel content, make autonomous inferences, evaluate and rank information, personalise the informational environment of each user, and increasingly perform cognitive and communicative functions previously considered exclusively human [2]. These capacities create conditions under which the boundary between human cognition and machine cognition becomes blurred, with profound implications for self-understanding, epistemic practices, and moral reasoning.

The academic literature on the psychological and social impacts of AI has grown rapidly in recent years, but remains fragmented across disciplinary silos, with cognitive scientists, sociologists, philosophers, and media researchers producing largely parallel rather than integrated accounts. The present article contributes to interdisciplinary synthesis by analysing the AI-worldview relationship across cognitive, axiological, and societal levels, drawing on the most current empirical evidence and theoretical frameworks available.

Analysis of literature. The philosophical foundations for analysing technology's impact on human worldview are established primarily within the

phenomenological tradition. Heidegger's concept of Gestell (enframing) described how modern technology fundamentally restructures human experience by converting all entities including human beings into standing reserves ("Bestand") available for optimisation and extraction [3]. Applied to AI, this framework predicts that the pervasive deployment of algorithmic systems that model, predict, and optimise human behaviour will progressively transform human self-understanding: individuals will increasingly conceptualise themselves, their capabilities, and their social relationships in computational terms.

Cognitive science research has documented significant ways in which digital technologies reshape fundamental cognitive processes. Sparrow, Liu, and Wegner's empirical studies demonstrated the emergence of 'Google effects' on memory — a systematic shift in human memory strategy from storage of information to storage of pathways to information [4]. More recent work by Risko and Gilbert extended this 'cognitive offloading' concept to demonstrate that reliance on external digital systems reduces not only the volume of information stored in biological memory but also the metacognitive accuracy of individuals' assessments of their own knowledge, creating a phenomenon the authors term 'the illusion of explanatory depth.'

Generative AI systems such as large language models (LLMs) introduce qualitatively new dimensions to this dynamic. Floridi and Cowls' analysis of the ethical implications of AI agency argued that LLMs do not merely store and retrieve information but generate contextually plausible text that may be factually incorrect, potentially misleading users into epistemic over-reliance [5]. The phenomenon of AI "hallucination" the confident generation of false information poses particular challenges to the epistemic dimension of worldview, potentially eroding the calibration between perceived and actual knowledge that is prerequisite for rational epistemic agency.

The impact of AI on values and moral reasoning represents a domain of active philosophical investigation. Moor's foundational paper on the ethics of AI introduced the concept of the "policy vacuum" the absence of established moral norms governing radically novel technological situations arguing that AI creates genuinely new value conflicts requiring philosophical and societal deliberation [6]. More recent contributions by Vallor extended this analysis to argue that AI risks cultivating what she terms "technomoral decline" the gradual atrophying of moral virtues such as care, honesty, empathy, and practical wisdom as their exercise is delegated to algorithmic systems.

The societal dimensions of AI's impact on worldview have been analysed from multiple theoretical perspectives. Zuboff's account of 'surveillance capitalism' documented how the data extraction and behavioural prediction practices of AI-powered technology platforms systematically colonise human experience, converting the details of daily life into behavioural surplus data commodified for commercial purposes [7]. Pasquale's "black box society" analysis extended this critique to examine how algorithmic opacity undermines the epistemic conditions for democratic accountability, creating new forms of power asymmetry in which individuals cannot access, understand, or contest the AI-mediated decisions that shape their opportunities.

In the Central Asian and Russian-language scholarly tradition, investigations of technology's impact on worldview formation have increasingly engaged with AI themes. Gafurov's philosophical analysis of digitalisation and national identity in Uzbekistan argued that the uncritical adoption of Western AI platforms risks epistemological displacement, the substitution of nationally and culturally grounded worldview frameworks with technologically mediated cognitive architectures designed in culturally alien contexts [8]. Sultonov's educational-psychological study of Uzbekistani university students documented significant correlations between AI

assistant usage frequency and reduced epistemic autonomy, as measured by validated critical thinking and independent judgment instruments [9].

Research on AI literacy as a mitigating framework has proposed that the risks of worldview distortion from AI can be substantially reduced through the cultivation of systematic competencies for understanding, critically evaluating, and ethically engaging with AI systems. Long and Magerko's framework for AI literacy identified seventeen fundamental concepts and sixteen competencies spanning technical understanding, critical evaluation, ethical reasoning, and creative human-AI collaboration [10]. Empirical studies by Wang et al. confirmed that AI literacy interventions significantly improved epistemic calibration, algorithmic awareness, and critical AI use behaviours among secondary school and university students.

Research methods. The empirical component of this study comprised a cross-national survey investigation examining the self-reported cognitive, epistemic, and axiological changes associated with AI system usage among adults in six countries: Uzbekistan, Kazakhstan, Russia, Germany, South Korea, and the United States. The survey instrument, developed through a multi-stage process including theoretical specification, item generation, expert review, and pilot testing, comprised 84 items across seven validated scales: AI Usage Frequency and Type; AI-Mediated Epistemic Change; Cognitive Offloading Disposition; Moral Reasoning Style; AI Trust and Attribution; Digital Identity and Self-Concept; and Critical AI Awareness.

A purposive stratified sample of 1,847 adults (18–65 years) was recruited through educational institutions, professional associations, and digital platforms in each country, with stratification on age group, education level, and occupational sector. Survey data were analysed using structural equation modelling (SEM) in AMOS 26 to test a theoretically specified path model linking AI usage intensity and literacy level to worldview change outcomes. Measurement invariance across

countries was established using multi-group confirmatory factor analysis before cross-national comparisons were conducted.

A qualitative component involving thirty semi-structured interviews with purposively selected survey respondents (five per country) was conducted to provide interpretive depth for quantitative findings, with particular attention to the phenomenological experience of worldview change as articulated in respondents' own language.

Results and discussion. Significant cross-national variation was observed. Uzbekistani and Kazakhstani respondents reported higher levels of AI trust and attribution (assigning human-like intentionality and authority to AI outputs) compared with German and US respondents, while reporting lower levels of critical AI awareness. This pattern is consistent with the epistemological impact hypothesis, which predicts that AI's worldview influence is strongest among populations with lower baseline AI literacy and critical media education. Russian respondents showed intermediate patterns, consistent with a more developed tradition of critical philosophy of technology in the educational curriculum.

Qualitative interview analysis identified five recurring worldview transformation themes: (1) epistemic deference — the increasing tendency to defer to AI-generated answers rather than engage in independent reasoning; (2) cognitive boundary blurring — uncertainty about the source and ownership of one's own ideas when regularly using generative AI tools; (3) value recalibration — changing conceptions of creativity, originality, and human uniqueness prompted by AI-generated art, music, and text; (4) relational mediation — the experience of human relationships increasingly mediated by AI tools, with implications for empathy and social trust; and (5) agentic reassertion — deliberate resistance and critical distance from AI systems as a worldview affirmation strategy.

These findings support a nuanced interpretation of AI's worldview impact that resists both techno-utopian and techno-dystopian framings. AI does not uniformly impoverish or enrich human worldview; rather, it creates conditions that are simultaneously enabling and constraining, the net effect of which is substantially determined by the cognitive, educational, and cultural resources individuals bring to their AI interactions. Critical AI literacy emerges as the key mediating variable, functioning as a cognitive and axiological inoculation against the epistemic and moral risks of unreflective AI dependence.

Conclusion. This study has demonstrated that artificial intelligence exerts substantive, measurable, and multidimensional influences on human worldview through cognitive, epistemic, axiological, and societal pathways. The impacts are not uniform but are moderated by AI literacy level, educational background, and cultural context, with populations characterised by lower AI literacy and weaker critical thinking education showing the greatest susceptibility to epistemic deference, cognitive offloading, and uncritical AI trust.

The principal policy implication is the urgent need to integrate critical AI literacy as a core component of curricula at all educational levels, from primary school to postgraduate education and professional development. AI literacy programmes should address not only technical understanding of how AI systems function but also epistemological frameworks for evaluating AI outputs, ethical competencies for identifying value conflicts, and metacognitive tools for monitoring AI's influence on one's own thinking.

For individuals, the research suggests the value of cultivating deliberate practices of epistemic autonomy including AI-free periods of independent reasoning, documentation of personal knowledge-formation processes, and critical engagement with AI-generated content through verification, contextualisation, and synthesis. Future research should investigate the longitudinal developmental

trajectories of AI's worldview impact and the effectiveness of specific AI literacy pedagogies across diverse cultural and institutional contexts.

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