

Ecological Reshaping and Subjectivity Reconstruction of Content Production in University Internet Ideological and Political Education from the Perspective of Human-Machine Collaboration

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Abstract: With the explosive growth of Generative Artificial Intelligence (AIGC) and its deep intervention in the field of knowledge production, the content production ecology of Internet ideological and political education in universities is undergoing a historic transformation from "PGC/UGC" to "AIGC." While this technological leap significantly liberates productivity, it also triggers deep tensions between "technological subjectification" and "human objectification" within the educational field, confronting online ideological and political education with the dual challenges of ecological imbalance and a crisis of subjectivity. Based on Marxist human theory and the perspective of technophenomenology, this paper proposes that "human-machine collaboration" is not only a new paradigm for technological application but also the ontological basis for the ecological reshaping of online ideological and political education. The article argues that amidst the risks of "new alienation" constructed by intelligent technologies, we must transcend the binary opposition of "technocentrism" and "technological nihilism." By reshaping a collaborative ecology of "human leadership, machine assistance, and value guidance," we can achieve the subjectivity reconstruction of educators from "content manufacturers" to "value architects." Furthermore, this paper systematically elucidates the practical rationale for building a new ecology of human-machine collaborative education from three dimensions: the reconstruction of production relations, the return of emotional interaction, and the regulation of algorithmic power, aiming to provide a theoretical landscape and action guide for the high-quality development of university Internet ideological and political education in the intelligent age.

Keywords: Human-Machine Collaboration, Internet Ideological and Political Education, Content Production, Ecological Reshaping, Subjectivity Reconstruction, Generative AI.

1. Introduction

In an era where digital existence has become the fundamental mode of being for contemporary college students, university Internet ideological and political education (hereinafter referred to as "Network Ideological and Political Education") stands at the crossroads of technological change. If the popularization of the Internet solved the problem of coverage "from lines to planes," then the rise of Generative Artificial Intelligence (Generative AI), represented by ChatGPT and Sora, has initiated a profound transformation in content production "from quantity to quality" and "from human to machine." AIGC not only possesses powerful capabilities in text generation, image rendering, and video construction but also demonstrates human-like conversational interaction and logical reasoning levels. Such technological characteristics have rapidly elevated it from a marginal auxiliary tool to a core force in content production.

However, every "entry" of technology is a reconstruction of the existing order. In the traditional ecology of network ideological and political education, the educator (subject) transmits information to the educatee (object) through media (object), with clear boundaries between subject and object. With the intervention of AIGC, technology is no longer merely an intermediary; it begins to possess certain attributes of a "quasi-subject"—capable of autonomously generating

content, engaging in deep dialogue with humans, and even simulating emotional exchange. This tendency towards "technological subjectification" has caused a drastic displacement in the niche of content production: on one hand, algorithmic recommendations and Machine Generated Content (MGC) dominate information flows, squeezing the living space of traditional educational discourse; on the other hand, educators face the anxiety of being "disenchanted" by technology, fearing that their authoritative status in knowledge transmission and value guidance will be dissolved by algorithms.

Marx profoundly pointed out: "Machinery adapts itself to the weakness of the human being in order to turn the weak human being into a machine." [1] In the all-encompassing web woven by intelligent algorithms, will university network ideological and political education devolve into a "driverless" technological carnival? Where should the subjectivity of educators be placed? These questions concern not only the application of technology but also the essence of education. This paper aims to transcend the mere perspective of technological instrumentalism and re-examine the intrinsic logic of content production in network ideological and political education in the intelligent age from the height of the ecological philosophy of "human-machine collaboration." The article asserts that facing the impact of AIGC, we should not fall into "Luddite" technological resistance, but rather, on the basis of acknowledging the "quasi-subject" status of

technology, construct a new pattern of education characterized by human-machine symbiosis and value integration through ecological reshaping and subjectivity reconstruction.

2. Ecological Change: Structural Tensions in Content Production Triggered by AIGC

The widespread application of Generative AI marks the entry of network ideological and political content production into a new stage of "intelligent generation." This stage is not a linear extension of the original model but a structural reorganization of the entire production ecology, with tensions primarily manifested in three dimensions.

2.1. Discretization of Production Subjects: From "Central Dominance" to "Pluralistic Hybridity"

In the Web 1.0 and Web 2.0 eras, content production for network ideological and political education mainly relied on "Professionally Generated Content" (PGC) and "User Generated Content" (UGC). Although the scope of subjects expanded, it generally remained under "human" control, and the status of educators as core producers was relatively stable.

However, the entry of AIGC introduces "Machine Generated Content" (MGC) as a completely new variable.

The Squeeze of the "Quasi-Subject": Relying on tireless computing power and massive knowledge reserves, AI large models can generate thousands of ideological and political copies, posters, or videos in an instant. This "superhuman" productivity places human educators at a complete disadvantage in terms of the quantity and speed of information release, causing the voices of educators in the online public opinion field to potentially be drowned out in the vast ocean of machine-generated content.

The Cession of Power: When teachers become accustomed to using AI to generate lesson plans and reply to student inquiries, the discourse power of content production is actually implicitly transferring to algorithms. This cession of production power blurs the sources of ideological and political education content, evolving the originally clear binary structure of "Educator—Educatee" into a ternary hybrid structure of "Educator—AI—Educatee," where the boundaries of the subject become fluid and blurred.

2.2. Computationalization of Production Logic: From "Meaning Construction" to "Probability Prediction"

The core of ideological and political education lies in the generation and transmission of "meaning," which concerns faith, ideals, and values, possessing a high degree of humanism and transcendence. However, the underlying logic of Generative AI is "probability prediction" based on statistics.

Dissolution of Meaning: The operating mechanism of large models like GPT is to predict the next most likely word based on the preceding context. In this process, AI does not understand the deep historical logic and emotional depth behind concepts such as "communism" or "patriotism"; it is merely performing a mathematical permutation and combination of symbols.

Proliferation of Mediocrity: Generation strategies based on probability maximization often lead to AI-generated content

tending towards "mediocre correctness"—that is, grammatically standardized and logically coherent, but lacking depth of thought and emotional tension. If this "de-meaning" computational logic dominates content production, it will lead to network ideological and political education being filled with "correct nonsense," losing the educational power to touch souls and causing "spiritual anemia."

2.3. Mimicry of Interactive Relations: From "Life Presence" to "Digital Illusion"

Ideological and political education emphasizes that "students believe in the way only when they are close to the teacher," meaning the emotional connection between teachers and students is the prerequisite for education. AIGC possesses powerful anthropomorphic interaction capabilities, able to simulate human tone, emotion, and even personality.

False Empathy: When students converse with AI ideological assistants, they may develop emotional dependence due to the AI's "understanding" responses. However, this empathy is essentially an algorithmic imitation of human emotional data, a kind of "heartless warmth."

Alienation of Relationships: When students become accustomed to seeking psychological comfort and value answers from AI, gradually distancing themselves from real-world teachers and peers, interpersonal communication is replaced by "human-machine communication." This mimetic interactive relationship cuts off the direct collision between life and life in reality, confronting ideological and political education with the ethical risk of "de-humanization," turning education into a solitary digital game [2].

3. Theoretical Origin: The Dialectical Return of Subjectivity in the Perspective of Human-Machine Collaboration

Facing ecological upheaval, rebuilding the order of network ideological and political education cannot rely on simple "de-technologization," but must return to the height of Marxist human theory to find the path for the return of subjectivity within the dialectics of "human-machine collaboration."

3.1. Technological Alienation and the Objectification of Essential Human Powers

Marx believed that technology is the objectification of essential human powers. Humans extend their limbs and senses by making and using tools, thereby establishing their own subject status. However, engulfed by capital logic and instrumental rationality, the products of labor, in turn, dominate humans, leading to "alienation."

In the intelligent age, Generative AI, as the "objectified" product of human brain wisdom, possesses powerful capabilities that should have been sharp tools for improving the effectiveness of ideological and political education. The current "subjectivity crisis" is essentially humans losing control over the technological forces they created. Therefore, the core of "human-machine collaboration" is not humans depending on machines, nor machines replacing humans, but humans re-mastering machines, transforming AI from an "alien force" into a "force for me." This requires us to adhere to "human as the end, technology as the means" in content

production, ensuring that algorithmic logic always serves the logic of education.

3.2. "Symbiotic Subject": A New Educational Ontology

Traditional ideological and political education adheres to "single subject theory" or "dual subject theory" (educator and educatee). In the context of deep AIGC embedding, we need to introduce the concept of "Symbiotic Subjectivity."

Asymmetrical Collaboration: In a human-machine collaborative system, humans and AI are not equal ethical subjects. Humans possess free will, moral responsibility, and emotional experience, acting as "value subjects"; AI possesses data processing, pattern recognition, and content generation capabilities, acting as "tool subjects" or "functional subjects."

Complementarity of Capabilities: Human-machine collaboration aims to achieve an enhancement effect of "1+1>2." AI is responsible for processing massive information, providing creative materials, and diverse expressions, undertaking work at the "computing power" level; teachers are responsible for value gatekeeping, emotional injection, and sublimation of meaning, undertaking work at the "heart power" level. The two achieve complementarity and symbiosis of capabilities in an asymmetrical structure, jointly constituting the production subject of "Grand Ideological and Political Education" in the new era [3].

4. Subjectivity Reconstruction: The Role Metamorphosis of Ideological and Political Educators in the Intelligent Age

In the ecology of human-machine collaboration, the subjectivity of ideological and political educators (teachers) is no longer manifested in the monopoly of knowledge, but in the mastery of technology and the guidance of values. This requires teachers to achieve a fundamental metamorphosis in three roles.

4.1. Transition from "Knowledge Authority" to "Value Architect"

In the era of information scarcity, teachers were the containers of knowledge and sources of authority. But in the AIGC era, any student can obtain more comprehensive and detailed knowledge points than a teacher within seconds through AI. The "knowledge authority" of teachers has been thoroughly deconstructed.

Path of Subjectivity Reconstruction:

Teachers must transform from porters of knowledge to "Architects of Value." AI can generate a ten-thousand-word article on the "May Fourth Movement," but it cannot profoundly explain the ontological significance of the May Fourth Spirit for the growth of contemporary youth. The teacher's task is no longer to recount historical facts but to construct the value framework behind knowledge, guiding students to penetrate the fog of fragmented information and establish correct views of history, nation, and state. In human-machine collaborative content production, the teacher's core function is to design the value parameters in the "Prompt," delineating political baselines and moral boundaries for AI generation [4].

4.2. Leap from "Content Manufacturer" to "Interaction Designer"

In the past, ideological and political teachers spent a lot of energy writing lesson plans, making PPTs, and writing posts, typical of "handicraft workers." AIGC has lowered the threshold of content production to an extremely low level; teachers who remain at the level of basic content manufacturing will inevitably be eliminated.

Path of Subjectivity Reconstruction:

Teachers should upgrade to "Human-Machine Interaction Designers." This includes two levels:

First, Design "Human-Machine" Interaction: Master high-level Prompt Engineering capabilities, learning how to stimulate AI's creativity through precise instructions to produce high-quality content that has both "internet sense" and theoretical depth.

Second, Design "Student-Machine" Interaction: Design interaction scripts and scenarios for students and AI assistants on network ideological and political platforms. For example, designing a virtual scenario of "Dialogue with Young Marx," where the teacher needs to preset the logical path of the dialogue, key knowledge points, and value guidance points, allowing AI to interact with students within the script set by the teacher. At this time, the teacher becomes the director and screenwriter behind the scenes, controlling the rhythm and direction of education [5].

4.3. Return from "One-way Transmitter" to "Emotional Connector"

The more developed technology becomes, the more precious emotion becomes. AI can simulate tone but cannot convey sincerity; it can generate comforting words but cannot provide present companionship.

Path of Subjectivity Reconstruction:

Teachers should return to the position of "Emotional Connector." In network ideological and political content production, teachers must deliberately inject "life experiences" that AI cannot generate. For example, when narrating poverty alleviation, AI can only list data, while teachers can share the hardships and touches of their personal participation in poverty alleviation. This narrative based on real life experience is something machines can never replace. Teachers should use the time freed up by AI to invest more in deep heart-to-heart talks, ideological collisions, and humanistic care with students, using personality charm to ignite students' souls and compensate for the coldness of technological rationality [6].

5. Ecological Reshaping: Constructing a New Paradigm of "Human-in-the-Loop" Content Production

Based on the reconstruction of subjectivity, we need to reshape the ecosystem of network ideological and political content production at the practical level, building a closed-loop, dynamic, and value-aligned "Human-in-the-Loop" new paradigm.

5.1. Production Process Reshaping: The Quartet of Co-evolution

The traditional linear production process should be reconstructed into a spiraling collaborative process:

AI-Augmented Ideation: In the topic selection stage,

teachers use AI to analyze network-wide public opinion hot spots and student focus points. Through brainstorming with AI, multi-dimensional topic schemes are quickly generated, breaking personal thinking limitations.

Human-Machine Co-Creation: In the creation stage, teachers provide core viewpoints and value frameworks, while AI is responsible for material filling, copy polishing, and multi-modal (image, text, video) generation. Teachers "purify the value" of AI-generated content, eliminating incorrect information and injecting emotional elements.

Algorithmic Distribution and Value Weighting: In the dissemination stage, AI algorithms are used for precise pushing. Unlike the traffic logic of commercial platforms, the distribution of ideological and political content should introduce "value weights." The ideological weight set by teachers should be higher than the traffic weight, ensuring that high-quality content can break through "information cocoons" and reach target groups.

Data-Driven Iteration: Use AI to conduct sentiment analysis and attribution analysis on dissemination effects, feeding data back to teachers. Teachers then adjust the prompting strategy for the next round, achieving continuous evolution of content quality.

5.2. Discourse System Reshaping: Transformation from "Textbook Language" to "Smart Language"

For a long time, ideological and political education has faced a disconnect between "textbook discourse" and "network discourse." Generative AI possesses powerful style transfer capabilities, providing technical support for the transformation of discourse systems.

Reshaping Strategy:

Use AI to establish an "Ideological and Political Discourse Transformation Model." Teachers input rigorous theoretical texts into the model and ask AI to convert them into "internet slang," ACG expressions, or micro-video scripts favored by "Generation Z." In this process, teachers must strictly control the criteria of "faithfulness, expressiveness, and elegance," ensuring that the discourse transformation is "dispersed in form but concentrated in spirit," grounded but not vulgar, interesting yet meaningful. Through this transformation, a "smart ideological and political new discourse" system blending theoretical depth with dissemination heat is constructed [7].

5.3. Ethical Ecological Reshaping: Establishing a Defense Mechanism for "Tech for Good"

Addressing the misinformation, bias, discrimination, and ideological infiltration that AIGC may bring, a rigorous ethical defense mechanism must be established to purify the content production ecology.

Reshaping Strategy:

Establish Privatized "Ideological and Political Large Models": Universities should integrate resources to train or fine-tune vertical domain ideological and political large models based on a pure Marxist theoretical corpus, ensuring the political correctness of generated content from the source and avoiding direct use of unreviewed overseas commercial models.

Implement "Dual Review" System: In the content release link, establish a mechanism of "AI Initial Review + Human Re-review." The AI system is responsible for screening sensitive words and vulgar content, while ideological and

political teachers are responsible for reviewing political orientation and value logic, ensuring "responsibility for one's own text."

Conduct Algorithmic Literacy Education: Incorporate "how to detect deepfakes" and "how to critically view AI content" into the teaching system of ideological and political courses for college students, enhancing the digital immunity of educatees and blocking the infringement of harmful information from the receiving end [8].

6. Conclusion

Technology philosopher Stiegler once said: "Technology is both a poison and a cure." The wave of Generative AI brings risks of subjectivity dissolution to university network ideological and political education, but also provides an opportunity for ecological reshaping. Network ideological and political education from the perspective of human-machine collaboration is not a solo act of technology, but a duet of humans and technology.

In this new ecology, we must firmly uphold the fundamental stance that "humans are the masters of technology." Through subjectivity reconstruction, ideological and political educators will be liberated from heavy repetitive labor and return to the noble position of "engineers of the soul"; through ecological reshaping, network ideological and political education will bid farewell to one-way indoctrination and homogenized production, moving towards a new realm where precision, intelligence, and warmth coexist.

Looking to the future, with the increasing maturity of human-machine collaboration mechanisms, university network ideological and political education is bound to break through existing spatiotemporal limitations and capacity bottlenecks, building a new educational field in digital space that is ubiquitous, ever-present, and silently nurturing. This is not only a victory for technology empowering education but also a high exaltation of the human subjective spirit in the intelligent age.

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References

- [1] Marx, K., & Engels, F. Complete Works of Marx and Engels (Vol. 42) [M]. Beijing: People's Publishing House, 1979: 95.
- [2] Peng, L. Human-Machine Collaboration: A New Paradigm for New Media Content Production [J]. Journalism & Book Production, 2023(01): 5-12.
- [3] Feng, L., & Ni, G. Digital Transformation of Ideological and Political Education Based on Generative Artificial Intelligence [J]. Studies in Ideological Education, 2024(02): 46-53.
- [4] Liu, X., & Zhang, J. Three-Dimensional Exploration of Generative Artificial Intelligence Impacting University Ideological and Political Education [J]. Journal of National Academy of Education Administration, 2023(12): 66-75.

- [5] Wang, S. Technical Route, Security Risks and Prevention of ChatGPT Intervention in Ideological and Political Education [J]. Journal of Shenzhen University (Humanities & Social Sciences), 2023, 40(02): 153-160.
- [6] Sun, H. Ethical Risks and Governance of Generative Artificial Intelligence Empowering Ideological and Political Education [J]. Journal of Ideological and Theoretical Education, 2025(01): 112-118.
- [7] Yang, Y. Adherence to Subjectivity and Technological Empowerment of Ideological and Political Education in the Intelligent Age [J]. Studies in Ideological Education, 2025(03): 22-28.
- [8] Deng, H. Research on the Path of Precise Supply of University Internet Ideological and Political Education from the Perspective of Generative Artificial Intelligence [J]. China Higher Education, 2025(02): 55-60.