Postprint: Research on the Logic of Ecological Balance and Guidance and Regulation of Online Public Opinion in Universities in the Era of Intelligent Media

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Abstract

With the development of media iterative evolution and convergence, as well as the construction of digital survival frameworks, "intelligent media"—driven by intelligent algorithmic technology and simultaneously possessing the advantageous attributes of "bidirectional self-advancement," value embedding, and community integration, along with human-like characteristics such as "intelligence" and "smart sharing" and human-computer interaction properties—continuously amplifies and focuses latent social contradictions within the superimposed and intertwined transformational breakthrough and reform of social interest structures, cultural forms, and interaction paradigms, thereby accelerating the complexity trend of risk society. The ethical relationships in the information civilization era likewise present a dialogue logic of "humans and virtual humans, virtual humans and real society." The innovation and convergence of media technology, on the one hand, provide enormous possibilities for the release of social discourse, while on the other hand, constitute the most direct driving force for the evolution of the social public opinion ecology. [1] As the degree of heterogeneity in social structure deepens, network public opinion becomes increasingly emotional, acrimonious, "externalized," "generalized," and three-dimensional diversified. Under the reshaping of the technological-ecological ethical field, network ethical relationships such as privacy versus sharing, order versus freedom, and property rights versus security face challenges. University network public opinion, as a derivative product of the public sphere in the internet era, confronts even more guidance dilemmas, including "chaotic" dominance in public opinion dissemination, fragmentation in opinion distribution fields, "deformation" in public opinion expression forms, and obstruction in order regulation operations. The information dissemination mechanism of "algorithm platforms + social media + technology fusion" has altered the balance system and operational mechanism of

the university network public opinion ecology. Analyzing the organic composition and configuration of ecological balance in university network public opinion, grasping its dynamic operational mechanism, and accelerating the construction of a new pattern of public opinion guidance constitute objective necessities for implementing the spirit of the important speeches of the Party Central Committee and strengthening the construction of ideological positions in universities, and hold extremely important significance for optimizing campus public opinion structures and constructing long-term harmonious ideological positions in universities.

Full Text

Research on the Ecological Balance Logic and Guidance Mechanisms of University Network Public Opinion in the Era of Intelligent Media

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Abstract: As media undergo iterative evolution and convergence, constructing a landscape of digital existence, "intelligent media"—driven by smart algorithmic technology and characterized by "bidirectional self-advancement," value embedding, community integration, and quasi-human attributes such as "wisdom" and "intelligent sharing" —continually amplifies and focuses latent social contradictions amid the overlapping and intertwined transformations of social interest structures, cultural forms, and interaction paradigms. This accelerates the complexity of risk society, while ethical relations in the information civilization era manifest as a dialogue logic between "humans and virtual beings, and between virtual beings and real society." On one hand, innovations in media technology and convergence provide enormous possibilities for the release of social discourse; simultaneously, they become the most direct driving force behind the evolution of the social opinion ecology [1]. Network public opinion becomes increasingly emotional, sharp, "externalized," "generalized," and three-dimensionally diversified as social structural heterogeneity deepens. Under the reshaping of the technological-ecological ethics field, online ethical relationships such as privacy versus sharing, order versus freedom, and property rights versus security face challenges. University network public opinion, born from the public sphere as a derivative product of the internet era, confronts guidance dilemmas including "chaotic" dominance in public opinion dissemination, fragmentation of opinion distribution fields, "distorted" forms of public opinion expression, and blocked operation of order regulation. The information dissemination mechanism of "algorithmic platforms + social media + technological convergence" has altered the balance system and operational mechanisms of the university network public opinion ecology. Exploring the organic configuration of university network public opinion ecological balance and grasping its dynamic operational mechanisms to accelerate the construction of a new pattern of public opinion guidance

represents an objective necessity for implementing the spirit of the Party Central Committee' s important speeches and strengthening ideological 阵地 construction in universities. This endeavor holds vital significance for optimizing campus public opinion structures and constructing a long-term harmonious ideological 阵地 in higher education institutions.

Keywords: network ethics; public opinion guidance; ecological optimization; intelligent communication

1. Risks and Challenges: The Evolution of University Network Public Opinion in the Era of Intelligent Media Convergence

Under the communication framework co-loaded by computational logic [2], communicative logic, and social logic [3], new algorithms and artificial intelligence technologies constitute a special "extension of the human body" for media value selection mechanisms within the scope of digital conditions. The transformation of the internet and its triggered information revolution, together with media convergence and its driven evolution of public opinion, have profoundly changed human information distribution models while reshaping social forms and power relations, intensifying the complexity of public opinion. This has led to the coexistence of public discourse power migration and netizen mentality imbalance, contradictions between algorithmic precision integration guidance and filter bubble ethical dilemmas, and the overlapping of "collective unconsciousness" and "individual irrationality" in "responsibility dispersion" intertwined with "emotional and behavioral contagion."The urgent need for innovation in ideological 阵地 construction and mainstream public opinion leadership has become a typical portrayal of China' s current university network public opinion field, revealing differentiated mechanisms and contemporary characteristics determined by the association between specific subjects and the public opinion ecology within the framework of social public opinion common laws.

1.1.1 Platform Migration: The Socialization and Concealment of Network Public Opinion Guidance Targets

Driven by the integration of new technologies, social media has continuously expanded discourse power while becoming more socialized and community-oriented. The full coverage of diverse media and the mixing of expression platforms make it difficult to accurately identify and judge at the technical supervision level, impacting universities' traditional agenda-setting capabilities and public opinion control. University network public opinion has gradually shifted from "square public opinion" on highly public and easily monitored platforms like Weibo and official forums to "living room public opinion" on highly closed and difficult-to-monitor platforms like WeChat and group chats [4]. Under the ubiquitous trend of 5G, blockchain, and other technologies,

various video products exacerbate the difficulties of public opinion monitoring and analysis. The fragmented and fact-partial short-video media forms not only increase the difficulty of mainstream guidance and consensus building but also expose the current limitations of network emotion recognition and processing technologies in controlling concealed public opinion elements.

1.1.2 Technological Empowerment: The "Return of Discourse Power" and the Creation of New Opinion Leaders

With the rise of self-media, technological empowerment has boosted the emergence of public discourse. The "development of media networking" and the "generalization of technical networks" have made spontaneous media and individual communication increasingly prominent. Relying on the symbiotic multi-media platforms under internet dominance, university student media, self-organized discourse groups, and student opinion leaders utilize social media networks to organize texts, freely express opinions, and gather public opinion energy. This forms a "steaming-up model" of reverse agenda-setting, contrasting with the traditional top-down "waterfall model" of public opinion control—what Sartori termed "the state of pluralism of mutually competing communication media" — fully demonstrating the diverse and changeable values and behavioral patterns of university student groups, as well as their distinct self-awareness and individuality.

1.2.1 Domain Limitation Tendency: Fragmented Communication Fields and Self-Cultivation Leading to Consensus Deficiency

Based on different media matrices, university network opinion distribution fields present a vertical structure of "mainstream propaganda—multi-party platform interaction—group discussion" and a horizontal pattern of opinion gardens formed by heterogeneous student groups. Each circle-ized public opinion zone, combined with different social media platform communication attributes, forms a dispersed and independent distribution pattern of public opinion viewpoints, making it difficult to achieve complete wall-breaking integration at the platform level. Meanwhile, new algorithmic media led by short videos, through filter bubble-based tag push, further amplifies the "information cocoon" effect within the information barriers built by students' own cognitive biases and stereotypes. This triggers continuous self-cultivation among university groups, forming rigidified thinking that affects universities' organizational control over serious public issues and hinders mainstream public opinion leadership and ideological 阵地 construction.

1.2.2 Polarization Tendency: Expression Falling into Homogenization and Irrationality

High density and concentrated topics are prominent features of university network public opinion. Gustave Le Bon once noted: "When people gather in

crowds, their feelings and thoughts all focus in the same direction, their conscious personality disappears, and a collective psychology forms" [5]. On one hand, university student groups demonstrate independent consciousness, curiosity, and strong expression desires regarding network public opinion; on the other hand, being in the stage of worldview formation, they lack in-depth excavation and essential exploration of facts, easily following others' opinions and falling into the negative vortex of post-truth. Meanwhile, dominated by group psychology such as perceptual thinking, group pressure, belonging needs, "cognitive closure tendency," and "cognitive schema reinforcement," university public opinion groups often fall into the "spiral of silence" of opinions, forming "collective unconsciousness" and "individual irrationality" under responsibility-free encouragement. Under social media' s "echo chamber effect," virtually differentiated circles preferentially select opinions consistent with their groups, leading to "involution." Based on the virtual anonymity, conformity interaction, and psychological mechanisms of network communication, "responsibility dispersion effect" emerges, making polarization phenomena of intra-group homogeneity and inter-group heterogeneity increasingly prominent.

1.2.3 Emotionalization Tendency: Communication Infection Demonstrating Strong Interaction and Rapid Response

From the information focus stage where network topics flow to form "resonance effects" and "spillover effects," extending to the public opinion diffusion stage of emotional rise and wave transformation, and further to the climax stage of group behavior outbreak, relying on the efficient interaction system constructed by university "strong-tie networks," network public opinion events and university student group emotional evolution mutually promote each other. This demonstrates communication laws of general issues becoming hot-spotted, private issues becoming publicized, ordinary issues becoming politicized, local issues becoming globalized, and simple issues becoming complicated. According to the "contagion theory" of collective behavior, Barker pointed out that emotional contagion has characteristics of mutual infection and circular reflection. Under the expansion of irrational emotions, "virus infection" can easily cause biased and distorted expression by university network public opinion subjects, suffering from negative incitement by "populist" and "anti-intellectual" ideologies, and breeding potential accompanying risks such as "cyber violence" and "rumor dissemination."

2. Ethics and Rules: The Boundaries and Order of Network Public Opinion Expression

As an important component of information ethics, network technology ethics and network ecological environment ethics together constitute the dual foundational regulation of big data network ethics in the digital intelligence era. The former focuses on exploring principles and norms of interaction between information technology subjects and their service objects, between technology

subjects and social relations, and among different technology subjects; the latter concentrates on grasping the interaction principles, relations, and norms among different network user subjects. While enjoying the dividends of intelligent integrated communication and digital interconnection technologies, people must face increasingly severe and complex ethical challenges such as information security, information pollution, information gaps, and information alienation. In the current public opinion ecology system where public opinion supervision is weak in both self-discipline and external discipline, technical regulation and moral evaluation are absent, and new public opinion expression and regulation ethics remain unclear, vague ethical boundaries and neglected ethical rules can easily plunge university network public opinion, belonging to the public sphere category, into a disorderly anomie system. Constructing technical and ecological environment ethical norms adapted to university cyberspace, effectively defining ethical boundaries, and regulating anomie tendencies are necessary paths to promote harmonious and orderly development of network public order and public space.

2.1 Boundary Crisis: Ethical Dilemmas in Network Public Opinion Control

The regulatory role of ethics lies in shaping internalized ethical boundaries. The U.S. Council on Big Data, Ethics and Society summarized network ethics into five aspects: digital identity defined by information sum, digital divide inherent in technological preemption, privacy as an exclusive right to know, safety as protection of subjective and objective legitimate rights and interests, and accessibility as the legitimate rights of bilateral review, filtering, use, and acquisition. Due to the lag in coordination between technical procedures and institutional norms, university network public opinion, as an important component of the overall network public opinion ecology development and construction, derives numerous ethical conflicts in the process of achieving its ethical value goals, coexisting with social network public opinion in multi-dimensional value rationality. These mainly include:

First, information sharing versus privacy and property rights. In his speech at the opening ceremony of the Second World Internet Conference, General Secretary Xi Jinping advocated constructing a "community of shared future in cyberspace,"establishing tangible or intangible group organizations existing in internet space based on four core connotations of equality and respect, innovative development, open sharing, and security and orderliness, to achieve openness and sharing of data information. Meanwhile, as the foundation and purpose of the five development concepts in the 14th Five-Year Plan, the sharing concept emphasizes the prior status of humans as ethical and moral subjects regarding procedural norms and evaluation scales. However, to date, technical implicit peeping at the level of "internet memory" such as browsing traces and big data user profiling, as well as artificial privacy leakage through illegal information tracking and extraction, and even ruthless trampling of intellectual property

rights, have made information sharing era ethical contradictions increasingly profound with the improvement of intelligent technology.

Second, massive think tanks versus information authenticity. In the era of intelligent communication, network public opinion development sacrifices accuracy for faster and more data possibilities. On one hand, social units can use big data systems to scientifically analyze and integrate into users' life scenarios and social networks, building multi-dimensional databases in human-machine fusion to provide better quality media services. On the other hand, according to Rothbaum' s "secondary control theory," individuals lose understanding and control of their situations when the external environment is not a directly accessible primary environment, turning to interpret and explain through imagination and fantasy to alleviate anxiety caused by environmental unknowns [6]. Consequently, the data operation logic of quantity over quality also produces more information anxiety, which, through direct grafting of imagination and stereotypes or even intentional manipulation by lawbreakers, becomes a breeding ground for cyber violence, rumor proliferation, and water army hype. Meanwhile, when media organizations cannot balance overall truth and practical efficiency, they often adopt post-fact clarification attempts to remedy misinformation caused by complex information and fragmented fact interpretation. However, this inevitably breaks the original authentic verification system, assists the spread of negative "post-truth" effects, and exacerbates netizen mentality imbalance.

Third, information freedom versus network order and security. Similar to Posner' s "procedural justice and efficiency core" transplanted to network public opinion revealing mutually constraining and interdependent relationships, information freedom and network order conflict yet remain closely connected. Without order, freedom cannot exist; without freedom, order has no foundation. Tilting the balance leads to network hegemony, rampant individualism, and overflowing critical emotions, or causes information blockage and hindered social production and operation. Moreover, the anonymity, immediacy, openness, and interactivity of networks intensify potential expression crises. Therefore, network public opinion construction places higher demands on deepening university ideological culture and ethical value concepts, establishing bounded relative freedom consciousness, strengthening university network public opinion order construction, and consolidating a network ethical atmosphere where information freedom rights are enjoyed under order constraints.

2.2 Public Order: Ethical Regulation of Network Public Opinion Expression

Digital information technology has constructed virtual cyberspace, thus regulation of network public ethical behavior must return to the standardized use of intelligent interconnection debugging, information technology procedures, and protocols themselves. As the founder of information philosophy, Floridi introduced concepts of moral agent, moral patient, message, factual information, shell, envelope, and infosphere into information dynamics, and accordingly

pointed out the normative and educational role of ethics in public information activities [7]. Durkheim noted that the contradiction and deficiency of value judgment, meaning systems, and normative systems are fundamental characteristics of social anomie, that is, its core ethical and moral anomie. Information ethics issues in the intelligent media convergence era similarly derive and highlight their regulatory problems along with the inherent defects of interconnected digital technology, the lag of legal systems, and the moral deficiency of big data application subjects. External and internalized ethical boundary norms are an important link in maintaining network public opinion ecological balance.

Ethical regulation is an institutionalized moral norm based on subjective ethical spiritual concepts and integrated with objective social constraints. American scholar Richard Spinello, based on network ethics regulation research, proposed a network ethics technology theory combining network technology dominance with legal constraints, value norms, and market orientation [8]. Its core regulatory content includes ethical relationship anomie issues such as network freedom of speech and content control, intellectual property rights, privacy, and security, thereby guiding orderly and harmonious development of network public opinion space. Applying Marxist ethics focusing on ethical principles and obligations complements this perfectly, and network ethics content such as digital identity and divide, intellectual property rights, and security can all be summarized within the categories of freedom, equality, and security in the Marxist ethical system. Its ethical freedom emphasizes that behavior subjects with independent will and choice freedom spontaneously choose good or evil and bear corresponding consequences; ethical equality follows Marx' s principle of equal and just distribution in production relations, achieving common demands including protection of technology inventors' exclusive rights and users' shared benefits from technological achievements; ethical safety points to institutional external discipline constraints by state public power organs, safeguarding legitimate rights and interests in network subject interactions [9]. Thus, using institutional external discipline to guide self-discipline helps transform "network persons" into "moral persons" and "network behaviors" into "moral behaviors." This is achieved by cultivating and practicing core socialist values to regulate network moral and ethical field order, constructing mutually beneficial and public-interest relationships to adjust network market ethical field interactions, and implementing unified rights and obligations responsibility consciousness to constrain network technology ethical field behaviors.

3. Pluralistic Unity: Model Architecture and Guidance Paths for Network Public Opinion Ecological Balance

As a subfield of media ecology research, university network public opinion ecology is a self-organizing dynamic system formed by the interaction and mutual constraint among communication subjects around network public opinion development and evolution, based on the joint action of cyberspace systems and real social environments, university ideological 阵地 construction and media plat-

form operation, under the constraints of network public opinion communication norms and ethical principles. Based on the examination of network ecological balance relations, this paper constructs a university network public opinion ecological operation architecture (see Figure 1 [Figure 1: see original paper]) that features mutual adaptation and regulation among network public opinion subjects, objects, noumena, carriers, and intervention bodies, integrating technical and humanistic development backgrounds with comprehensive management of network ethics regulation.

As shown in the architecture, within the network ecological public sphere, free university public opinion subjects, rational flow of noumena, evolution of objects, carrier gatekeeping and guidance, and intervention system control always maintain interdependent and mutually constrained symbiotic relationships. This forms a public opinion field where the technical "hard environment" dominates, social "soft environment" resonates, media communication environment echoes, network technology ethics lays the foundation, and network ecological environment ethics provides coverage. The university network public opinion communication subjects, based on public opinion freedom and other network information communication norms, consist of producers, disseminators, consumers, and deconstructors. Through layer-by-layer evolution of object public affairs public opinion, they trigger network opinion discussions, social sharing, and public opinion dissemination to form synchronic opinion expression or differential public opinion confrontation. This is influenced by the presence and strength of mainstream media participation, network traffic, and relevant party feedback, affecting the aggregation trend of noumenon opinions. Carriers build and deepen public opinion platforms connecting various elements, bearing responsibilities for public opinion guidance, evaluation, and gatekeeping while providing access paths for public opinion subjects. All nodes of university network public opinion are controlled by an intervention system led by government regulation, assisted by social supervision, and dominated by university unit governance. Corresponding intervention measures are adopted according to public opinion evolution stages to ensure university public opinion safety and achieve effective guidance. Firmly upholding the banner of the "19th National Congress Report" proposal to "attach great importance to the construction and innovation of communication means, and improve the dissemination, guidance, influence, and credibility of news public opinion" as the guidance for public opinion work in the intelligent media era, the architecture takes the two dimensions of public opinion ecological balance—environment and ethics—as entry points, with various system elements as bases, mutually promoting and constraining each other to jointly maintain a stable and positive development pattern of university public opinion ecology, forming a new paradigm of "pluralistic unity" and "unity in pluralism."

3.1 Innovating Network Public Opinion Guidance Technology Applications and Strengthening Intelligent Comprehensive Regulation

University network public opinion guidance must fully grasp intelligent communication thinking, effectively integrate big data analysis technology and internet language application technology, deepen the coordinated development of "algorithm + manual" intervention systems, and enhance discourse transformation and expression capabilities. Dynamically set agendas and gauge topic rhythms, adapting to events and innovating according to trends. Focus on "timing, degree, and effect" and respond to "timing, degree, and effect" requirements. First, construct a university network public opinion graded algorithmic early warning mechanism, building algorithmic data models and graded indicator systems layered by public opinion evolution stages. Through efficient graded guidance, promote the transformation of university network public opinion guidance from reactive to proactive. Develop personalized algorithmic indicator recommendations for campus media and university network users, monitoring media data across different mediums and fields in real time. Second, reasonably apply algorithmic recommendation mechanisms to achieve scientific classification, precise push, key care, and strengthened guidance. University network media should align with the psychology of faculty and student groups, leverage the advantages of "two-step flow" communication, achieve precise docking and diversified expression, be targeted, and improve the art and level of public opinion guidance. Third, follow big data think tank systems and intelligent communication logic to provide new possibilities for rumor tracking and fact verification. Facing network sudden public opinion, universities can rely on big data technology to control crisis communication through judgment and prediction capabilities for fragmented and unstructured opinion expression symbols across all-media platforms. Through strong resource integration and information release capabilities, they can master public opinion discourse power and initiative, eliminating space for university rumor breeding. Fourth, leverage the value-embedding technical attributes of intelligent media, implant "main melody" public opinion genes, and form interactive guidance. Add "promotional" or "preventive" keyword settings for labeled university faculty and student users, intercept extreme vocabulary information, and debug the proportion of mainstream news public opinion. Increase mainstream value indicator embedding design, shape public opinion dominance guided by mainstream ideology, and deepen technical flow and material flow in the university network public opinion ecology.

3.2 Grasping New Forms in Network Public Opinion Fields and Creating New Paradigms of Public Opinion Expression

General Secretary Xi Jinping emphasized the need to adapt to the trends of segmented and differentiated communication and accelerate the construction of a new pattern of public opinion guidance. Facing university network public opinion fields where university students are the main subjects engaged in information transmission and reception, interest expression, and opinion interaction, media

convergence development and discourse expression transformation have become trend orientations for university network public opinion work. The "three micro-ends" integrated media matrix carries "visual politics," community platforms assist internet meme iterative creation, and network opinion expression coexists with rationality and entertainment. Together, these construct new forms of university network public opinion field "externalization," "differentiation," and "generalization," forming a public opinion boom under Bakhtin' s "carnival" context and boosting the transfer and upgrading of public opinion hotspots. Strengthening university network public opinion guidance work requires further deepening orientation understanding, law understanding, and discourse rights awareness. First, strictly follow General Secretary Xi Jinping' s requirements for journalists to adhere to correct public opinion orientation, always implementing the Marxist view of journalism and fulfilling the pioneering role of university public opinion guidance in complex and changing public opinion environments. Second, improve university "gatekeeping" systems and cultivate "opinion leaders." According to Gladwell' s "tipping point" rule and Bass' s "dual behavior model," comprehensively, multi-link, and focus-regulated monitor public opinion flow to prevent public opinion crises. Third, dare to speak and speak accurately. Enhance university social trend discrimination capabilities, strengthen faculty and students' "four confidences," persist in implementing "positive propaganda," seriously confront "negative issues," pay attention to university student network psychology, and actively respond to faculty and student concerns. Use agenda-setting to lead discourse dominance, construct "mainstream narratives,"integrate all-media diversified expression, and tell university stories well.

3.3 Standardizing Network Ethical Order and Optimizing University Network Public Opinion Ecology Construction

Network ethics, composed of network technology and network ecological environment ethics, represents systematic thinking on principles and norms for handling various relationships in the network ecological environment [10]. Spinello once pointed out in *Cyberethics: Morality and Law in Cyberspace*: "The ultimate managers of cyberspace are moral values, not engineers' code" [11]. Applying Lawrence Lessig' s "network behavior normative power" theory, strengthen university network ethical order based on dimensions of construction, self-discipline, boundaries, and supervision. Guided by Spinello' s network ethics technology regulation research and Marxist network ethics view, integrate digital technology, moral values, and political-economic fields, deeply explore university public opinion ecological balance logic and operational mechanisms, and improve guidance regulation. First, emphasize the leading role of information technology ethics in network ethics paradigms, establishing responsibility consciousness unifying rights and obligations to regulate network technology ethical field behaviors. Professor Peng Dingguang once pointed out that research on technology ethics issues lies not only in technology application or interpersonal relationship regulation but also in technology production design. Embed moral elements in technology production design, enabling spontaneous regulation and guidance

activities during popularization to achieve "architectural moral norms."Standardize information technology procedures and digital protocols, deeply understand algorithmic data logic in the intelligent media era, and realize network public opinion guidance ethical value goals centered on information justice, information freedom, privacy and security, and information authenticity. Second, enhance network subject self-discipline consciousness, regulate university network moral and ethical field order and interaction behaviors by cultivating and practicing core socialist values. Firmly grasp the leadership and discourse power of ideological work, eliminate overseas cultural infiltration and public opinion backflow, and maintain the rule order and ethical system of university public opinion expression. Third, accelerate the construction of network ethical norms adapted to network public space, establishing rule boundaries. Balance the value rationality of instrumental rationality and technical authority with procedural justice and moral literacy, improve expression rules, moral evaluation laws and regulations, and corresponding supervision and management mechanisms. Unblock the ethical context of university public opinion ecology governance, give full play to the internal coordination, balance, and self-purification mechanisms of public opinion ecology. Under the premise of respecting its own public ecological laws, provide reasonable regulation and overall optimization to construct an efficient, smooth, harmonious, and open public opinion ecological environment.

Postman pointed out in his work *Technopoly: The Surrender of Culture to Technology* that the massive efficiency released by technological breakthroughs is not a quantitative increase or decrease but a holistic ecological transformation. In the artificial intelligence era, intelligent algorithmic media and big data network systems, as core variables shaping the new pattern of network public opinion ecology, while stirring public opinion ecological thresholds and niche widths and triggering public opinion risks and challenges, provide new ideas for maintaining the dynamic balance of university network public opinion ecology and promoting path innovation in network public opinion guidance. Relying on the symbiotic evolution of interdependence between public opinion subjects and the public opinion environment, the collaborative operation of integrated and convergent public opinion energy flow in one axis and multiple directions, and the social energy control and release of discourse and power in the network public opinion energy field, the open system of network public opinion ecology uses technical environment ethical regulation and intelligent communication technology innovation as ecological compensation mechanisms, network rule of law and media credibility resonance as redundancy mechanisms, and network public opinion expression transformation and self-organization function deepening as adaptation mechanisms. This promotes virtuous cycles in network public opinion information aggregation, dissemination, resonance, iteration, and spillover, giving full play to the balance mechanism of comprehensive coordination and self-purification of public opinion ecology [12].

University network public opinion ecology is controlled layer by layer by the macro framework of social environmental changes, the meso-level orientation of technology-society interaction, and the micro-level judgment of individual

psychological consciousness. Its environmental changes cannot be separated from the internet' s reshaping of social media and public opinion on network platforms, and its ecological balance maintenance is also determined by the convective influence of ideological and political education environments, university student group psychology, social transformation perspectives, and communication media attributes. Under the premise of respecting the laws of network public opinion ecology itself, by analyzing and connecting dynamic mechanisms and logical evolution, maintaining moderate regulation and overall optimization, and balancing the relationship between technological innovation and value goodness, we can strive to construct a long-term, smooth, intelligent, pluralistic, positively-driven, open, and harmonious efficient network public opinion ecological environment.

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Note: Figure translations are in progress. See original paper for figures.