Language Concealment of Platform Media and the Cognitive Reconstruction of Critical Media Literacy

Zixun Wang[1] and Xusheng Zhang*[2]

[1]School of Design,Dalian Minzu University,Dalian,China
[2]College of Computer Science and Technology,Zhejiang University,Hangzhou,China

Abstract: In the digital era characterized by the deep integration of Generative Artificial Intelligence (GenAI) and algorithmic recommendation systems, traditional media literacy education is facing a severe paradigmatic crisis. The instrumentalist approach, which relies on 'fact-checking' and 'information skills', fails to effectively address the cognitive narrowing and emotional polarization driven by algorithms. Grounded in the ontological foundation of the 'Progressive Weakening-Compensation Principle' (Wang, 2009) and drawing upon the three-layer cognitive structure of 'Soma-Emotion-Meaning' alongside the Regulate-Imagine-Discover (RID) model (Zhang, 2026), this paper offers an ontological diagnosis of the cognitive erosion mechanisms perpetuated by platform media. The analysis reveals that algorithmic recommendation systems hijack the 'somatic markers' at the emotional layer, thereby stripping subjects of their epistemic agency. This process triggers the 'Language Concealment Effect'—detaching linguistic symbols from their embodied experiences and authentic emotional anchors, reducing them to hollow clickbaits. To counter this crisis, this paper proposes a cognitive reconstruction of critical media literacy, advocating a shift from mere 'information critique' to 'ontological reflection'. By restoring embodied perception at the 'soma-emotion' layers, we can rebuild the cognitive stabilization scaffolding, thereby reclaiming individuals' meaning-making capacities and cognitive autonomy in the algorithmic age.

Keywords: Critical Media Literacy; Generative AI; Language Concealment Effect; Three-Layer Cognitive Structure; Algorithmic Cognition; Progressive Weakening-Compensation Principle

1 Introduction: The Paradigmatic Crisis of Media Literacy Education and the Ontological Turn

In today's highly mediated society, the human cognitive environment is undergoing an unprecedented structural mutation. The proliferation of Generative Artificial Intelligence (GenAI) and the seamless penetration of algorithmic recommendation systems have not only transformed the efficiency of information production and distribution but have fundamentally reshaped the ontological status of knowledge and the cognitive generative mechanisms of individuals. Faced with this challenge, the global educational community generally views "Media Literacy" as the core strategy to enhance students' survival capabilities in the digital age. However, contemporary media literacy education is trapped in a profound paradigmatic crisis.

Mainstream media literacy education has long been constrained by an instrumentalist and rationalist presupposition, defining its core objectives as the cultivation of "fact-checking," "information evaluation," and "critical thinking skills." This paradigm assumes that as long as individuals are equipped with sufficient information discernment techniques and logical analysis capabilities, they can maintain cognitive autonomy in a complex digital environment. However, recent empirical studies and theoretical reflections have posed severe challenges to this assumption. For instance, Lindebaum et al. [10], in their seminal study published in *Organization Studies*, profoundly point out that Large Language Models (LLMs) and GenAI are systematically transferring "epistemic agency" in higher education to Big Tech companies, causing students and scholars—originally knowledge creators—to gradually degenerate into "epistemic consumers," and even triggering a state of "organized immaturity" within the educational system. This loss of epistemic agency does not stem from a lack of individual information skills, but from the covert takeover of the cognitive generative process by underlying technological architectures.

Simultaneously, research on "filter bubbles" and "echo chambers" in social media algorithms also demonstrates that pure rational critical skills often appear pale and powerless in the face of powerful algorithmic inducements. A system-

* Corresponding author: zhangxs001@zju.edu.cn

atic review by Ahmmad et al. [1] of research over the past decade reveals that algorithmic biases not only structurally amplify ideological homogeneity but also profoundly limit youth's viewpoint diversity and cognitive autonomy through opaque recommendation mechanisms. More crucially, He and Fan [7] propose from a socio-psychological perspective that filter bubbles are not merely produced by algorithms; rather, they emerge through the recursive interaction of motivated cognitive processing, identity-based social networks, and the algorithmic amplification of emotional cues. Among these, "emotion"—such as anger and threat—is the cross-layer core mechanism driving this closed loop. This implies that if media literacy education continues to ignore the antecedent role of "emotion" and "embodied perception" in information processing, remaining merely at the surface level of logical reasoning, it is doomed to fail in touching the deep mechanisms of algorithmic manipulation.

It is precisely based on the aforementioned dilemmas that this paper advocates for a radical "ontological turn" in Critical Media Literacy (CML). We will transcend traditional psychological and informational frameworks, introducing Wang Dongyue's "Progressive Weakening-Compensation Principle" as the macro-ontological background [12], and employing Zhang Xusheng's three-layer cognitive structure of "Soma-Emotion-Meaning" and the RID (Regulate-Imagine-Discover) model as the core analytical tools [14, 15]. This paper argues that the deep control of platform media over individuals is essentially an extreme manifestation of the "Language Concealment Effect"—algorithms, by hijacking underlying emotional schemas and somatic markers, detach surface-level linguistic symbols (information) from authentic life experiences, reducing them to hollow stimuli. Therefore, the reconstruction of critical media literacy cannot merely be "reflecting on information," but must be "reconstructing the cognitive foundation"—that is, by restoring the embodied anchoring of soma and emotion, to rebuild the "cognitive stabilization scaffolding" that resists algorithmic erosion.

1.1 The Historical Arc of Media Literacy Education and the Current Rupture

Media literacy education has a history stretching back to at least the 1930s, when Leavis and Thompson's *Culture and Environment* first proposed the systematic cultivation of critical reading skills as a defence against the manipulative potential of mass media [9]. Through the subsequent decades, the field evolved through several distinct phases: the "inoculation" model of the 1960s and 1970s, which sought to protect audiences from media effects; the "representation" model of the 1980s and 1990s, which emphasised the constructed nature of media texts; and the "participatory" model of the 2000s and 2010s, which celebrated the democratising potential of digital media production.

Each of these phases represented a genuine advance in the sophistication of media literacy theory and practice. Yet each also shared a common assumption that the current moment renders untenable: the assumption that the primary cognitive challenge of media literacy is the critical evaluation of discrete media texts or messages. This assumption presupposes a relatively stable distinction between the media environment and the cognitive subject who navigates it—a subject who stands, as it were, outside the media system and brings to bear upon it a set of analytical skills developed through education.

The convergence of Generative AI and platform algorithms has dissolved this distinction. When the media environment is no longer a collection of discrete texts to be evaluated but a continuous, personalised, algorithmically curated cognitive environment that shapes the very capacities through which evaluation is conducted, the text-centred model of media literacy reaches its limits. The challenge is no longer to evaluate media content but to understand and resist the cognitive capture that the media environment itself performs. This is a qualitatively different challenge, and it requires a qualitatively different theoretical framework.

2 The Instrumentalist Dilemma of Critical Media Literacy: A Theoretical Critique

For a long time, Media Literacy Education (MLE) has been entrusted with the high expectation of cultivating citizens' critical thinking and information discernment capabilities. However, with the evolution of the digital ecology, especially the deep integration of algorithmic recommendation systems and Generative AI, the traditional MLE paradigm has exposed its inherent instrumentalist limitations.

2.1 The "Cognitive Illusion" of Fact-Checking and the Instrumentalist Dilemma

Mainstream media literacy education often regards "fact-checking" as the core skill to resist fake news and algorithmic manipulation. This paradigm assumes that information is an objective data entity, and individual cognitive errors stem from a lack of logical analysis capabilities or the unreliability of information sources. Therefore, as long as students are taught how to identify information sources, recognize logical fallacies, and apply cross-validation techniques, their media literacy can be effectively enhanced.

However, this instrumentalist approach overlooks the essential characteristics of information production and distribution in the era of digital capitalism. On algorithmic recommendation-driven social media platforms, the presentation of information no longer follows a linear or objective logic; instead, it is a dynamic computational result based on users' historical behaviors, emotional preferences, and the laws of the attention economy. As Yu et al. [13] point out in their empirical study published in *Scientific Reports*, although higher levels of media literacy (including media operation knowledge and critical analysis capabilities) can enhance cognitive control and reduce the perception of information fragmentation, these pure cognitive skills often appear powerless in the face of highly personalized and emotional algorithmic nudges. Algorithms do not merely provide information; they continuously reshape users' cognitive frameworks and emotional structures through "micro-interventions" (nudges).

A deeper problem lies in the fact that the instrumentalist paradigm reduces media literacy to a "cognitive skill" detached from embodied experience, ignoring the emotional and motivational driving mechanisms behind information processing. He and Fan [7] demonstrate that the formation of filter bubbles is not purely a technological phenomenon, but rather "emotion" acting as a cross-layer mechanism, forming a self-reinforcing closed loop among individual motivated cognition, group identity, and algorithmic amplification. Emotional states such as anger, fear, or a sense of group belonging not only determine the visibility of information prior to rational judgment but also profoundly affect the probability of information being accepted or rejected. In this closed loop, pure "fact-checking" often encounters a "backfire effect"—when facts conflict with individuals' deep emotional schemas or identity, rational persuasion is not only ineffective but may even exacerbate belief polarization.

2.2 The Crisis of Epistemic Agency in the Era of Generative AI

The rise of Generative AI pushes this dilemma to an ontological crisis. Traditional search engines or recommendation algorithms primarily filter and rank within an existing information repository, whereas Large Language Models (LLMs) directly intervene in the "generation" process of knowledge. Lindebaum et al. [10] keenly capture the essence of this transformation: LLMs, as powerful "epistemic technologies," are profoundly altering the fundamental rules of "who produces knowledge, how knowledge is produced, and what kind of knowledge is produced."

In higher education and daily cognitive practices, the widespread application of LLMs has led epistemic subjects (students, scholars, the public) to gradually "offload" complex meaning-making processes to machines. This offloading is not only reflected in the automation of text writing or data analysis but more significantly in the surrender of epistemic authority. As Stewart [11] points out in her deep content analysis of Reddit educational communities, the application of AI in higher education is by no means a simple technological upgrade, but a structural reorganization involving power, authorship, and academic authority. When students become accustomed to relying on AI to generate answers, construct logical frameworks, or even simulate emotional expressions, they are essentially abandoning their core status as "epistemic agents," degenerating into "epistemic consumers" of algorithmic outputs or merely "verifiers."

This loss of epistemic agency constitutes a new form of "organized immaturity" in the educational domain [10]. It deprives individuals of their subjectivity in the complete cognitive chain of "Discover-Imagine-Regulate," reducing meaning-making to the passive acceptance and collage of machine-generated codes. In this context, traditional media literacy education appears particularly thin: when even "thinking" itself is offloaded, teaching students how to "think critically" becomes an empty slogan.

2.3 The Resilience Discourse and Its Ideological Limitations

Beyond the fact-checking paradigm, a second dominant strand in contemporary media literacy discourse centres on the cultivation of "resilience"—the capacity of individuals to withstand, adapt to, and recover from the psychological pressures of the digital information environment. Resilience-based approaches, popularised through social-emotional learning frameworks and digital well-being curricula, recommend strategies such as mindfulness, cognitive reframing, and emotional self-regulation as buffers against the harms of algorithmic manipulation. While these interventions possess genuine therapeutic value at the individual level, they share a fundamental ideological limitation with the fact-checking paradigm: they pathologise the individual rather than the system.

By framing algorithmic harm as a problem of insufficient personal resilience, such approaches implicitly naturalise the structural conditions—platform architectures, surveillance capitalism, the commodification of attention—that generate the harm in the first place. The political philosopher Wendy Brown's critique of neoliberal subjectivity is instructive here: when systemic problems are systematically translated into individual therapeutic challenges, the political imagination required for structural critique is foreclosed [3]. Applied to media literacy, the resilience discourse risks producing what Lindebaum et al. [10] would call "organised immaturity" at the collective level—a population of digitally "resilient" individuals who are, paradoxically, all the more compliant with the cognitive regimes imposed by platform capitalism.

A genuinely critical media literacy must therefore resist the seduction of the resilience turn and insist on the structural, ontological, and political dimensions of algorithmic harm. This requires a theoretical vocabulary capable of articulating not merely what individuals should do differently, but what kinds of cognitive environments are conducive to human flourishing and what kinds are fundamentally hostile to it.

2.4 Paradigmatic Breakthrough: Toward the Reconstruction of Cognitive Ontology

Faced with the instrumentalist dilemma and the crisis of epistemic agency, Critical Media Literacy (CML) must achieve a profound turn from "information skills" to "cognitive ontology." This turn requires us to no longer view media as objective tools or information carriers external to the subject, but as an "environment" or "infrastructure" that deeply participates in the subject's cognitive generation and mode of existence.

The core of the ontological turn lies in re-establishing the central status of the "embodied subject" in the cognitive process. We need a theoretical framework capable of penetrating the surface of algorithms and striking directly at the underlying cognitive generation, to reveal how platform media dismantle individuals' cognitive stabilization mechanisms by manipulating emotions and symbols. To this end, this paper introduces Wang Dongyue's "Progressive Weakening-

Compensation Principle" and Zhang Xusheng's "Three-Layer Cognitive Structure" theory, providing a solid philosophical foundation for the reconstruction of critical media literacy.

3 The Ontological Diagnosis of Platform Media: Language Concealment and Cognitive Erosion Mechanisms

To profoundly understand the erosion of individual cognition by platform media (especially algorithmic recommendation systems and Generative AI), one must transcend surface-level psychological or communicative analyses and delve into the ontological structure of cognitive generation. Grounded in Wang Dongyue's "Progressive Weakening-Compensation Principle" as the macro-ontological background [12], combined with Zhang Xusheng's three-layer cognitive structure of "Soma-Emotion-Meaning" and the RID model [14, 15], this paper offers a systematic ontological diagnosis of the operational mechanisms of platform media.

3.1 Progressive Weakening-Compensation and the Alienation of Cognitive Compensation

Wang Dongyue, in *The General Theory of Evolution* (物演通论), posits the "Progressive Weakening-Compensation Principle," arguing that cosmic evolution is a process of decreasing existence degree (weakening) and increasing compensation degree (compensation) [12]. In biological evolution and the development of human civilization, the enhancement of cognitive capabilities is essentially a "compensation" mechanism—to make up for humanity's increasingly fragile survival status in nature. From embodied perception and emotional response to advanced symbolic language and logical thinking, every leap in cognition is to establish a more complex "stabilization scaffolding" to cope with an increasingly complex survival environment.

Within this framework, language and symbolic systems (the "Meaning" layer) are humanity's highest compensatory tools. However, this advanced compensation must always be anchored in underlying "somatic" perception and "emotional" responses to maintain the overall stability and authenticity of cognition. As Zhang Xusheng points out, the complete cognitive process follows the three-layer structure of "Soma-Emotion-Meaning" [14, 15]. Somatic perception provides the most fundamental survival anchor; emotion acts as a cross-layer mechanism to rapidly evaluate environmental stimuli and mobilize energy; while meaning (language, logic, belief) is the symbolic expression and reflective reconstruction of the former two.

The alienation of platform media lies in its powerful algorithmic computing power and generative capabilities, artificially severing the organic connection between these three layers, leading to the "alienation of cognitive compensation." Algorithmic recommendation systems no longer serve individuals' authentic survival needs or overall cognitive stability, but rather the commercial logic of platforms (e.g., attention capture, traffic monetization). In this process, platform media not only fail to provide effective cognitive compensation but exacerbate individuals' "weakened" state in the digital environment—making subjects more fragile, more susceptible to manipulation, and more dependent on external algorithmic compensation.

This dynamic constitutes what we might call a "compensatory trap": the very tools developed to compensate for human cognitive limitations become, through their commercial deployment, instruments that deepen those limitations. The printing press, the telegraph, the radio, and the television each represented a new compensatory layer in the history of human communication, each extending the reach of meaning-making while simultaneously introducing new forms of cognitive dependency. What distinguishes the current moment is not merely the scale or speed of this dynamic but its reflexivity: GenAI systems, trained on the accumulated outputs of human cognition, now generate content that feeds back into the cognitive environments through which humans develop their capacities for thought. The compensatory loop has become recursive in a qualitatively new way, and the implications for cognitive autonomy are profound.

Wang Dongyue's framework suggests that this recursive compensatory trap is not an accident but a structural feature of advanced civilisation: as cognitive tools become more powerful, the cognitive capacities they compensate for tend to atrophy, creating new dependencies that require further compensation [12]. The challenge for education is to interrupt this spiral—not by rejecting technological compensation altogether, which would be both impossible and undesirable, but by ensuring that the compensatory tools developed by civilisation remain in the service of, rather than in substitution for, the embodied cognitive capacities that constitute the foundation of authentic human meaning-making.

3.2 Emotional Hijacking and the Failure of "Somatic Markers"

The erosion of the cognitive structure by platform media first occurs at the "Emotion" layer. He and Fan [7] profoundly reveal the core mechanistic role of emotion in the formation of filter bubbles. Algorithmic recommendation systems (such as TikTok, Twitter/X) accurately capture users' emotional trigger points (such as anger, fear, curiosity, or intense group identity) through deep learning of behavioral data.

In Zhang Xusheng's three-layer cognitive structure, emotion should act as a bridge connecting the soma and meaning, playing the role of a "Somatic Marker"—providing intuitive value guidance for complex decision-making through embodied physiological responses (such as accelerated heartbeat, muscle tension). However, platform media artificially create emotional overload and polarization through high-frequency, high-intensity fragmented information stimuli. Algorithms continuously push content capable of triggering intense emotional responses to users, causing individuals' "somatic marker" systems to be in a constant state of stress, ultimately leading to failure or blunting.

This "Emotional Hijacking" causes individuals to lose their calm evaluation capabilities based on authentic life experiences when facing information. When emotion is accurately manipulated by algorithms and amplified into extreme anger or fanaticism, it is no longer a bridge to profound "meaning" construction, but degenerates into a barrier that closes the cognitive loop and reinforces filter bubbles. Individuals immersed in the emotional bubbles created by algorithms mistakenly believe they have gained an intense sense of existence and identity, while in reality, their epistemic agency has been quietly stripped away by the platform.

The neuroscientific dimensions of this process deserve particular attention. The somatic marker hypothesis, originally developed by Antonio Damasio to explain the role of bodily states in rational decision-making, posits that the body continuously generates affective signals that guide cognitive processing below the threshold of conscious awareness [5]. These signals are not mere accompaniments to rational thought; they are constitutive of it. When the somatic marker system is chronically over-stimulated by algorithmically curated emotional content, its calibration is disrupted: the system loses its capacity to distinguish between genuine threats and algorithmically simulated ones, between authentic social bonds and parasocial relationships with digital personas, between real-world disequilibria that demand cognitive attention and algorithmically manufactured controversies designed to maximise engagement.

This disruption has profound implications for the political dimensions of media literacy. He and Fan [7] demonstrate that the emotional mechanisms of filter bubbles operate not only at the individual level but through the social structure of identity-based networks. When algorithmic systems systematically amplify the emotional signals associated with in-group identity and out-group threat, they do not merely distort individual cognition; they reshape the social fabric of epistemic communities. The result is what we might call "affective tribalism"—a condition in which the capacity for cross-group understanding and deliberative dialogue is progressively eroded, not through explicit censorship but through the quiet manipulation of the somatic and emotional substrates of social cognition. Any adequate media literacy education must therefore address not only individual cognitive skills but the social and political conditions under which embodied, emotionally grounded cognition can flourish.

3.3 The Language Concealment Effect: Hollow Symbols and Fake Meanings

When the emotional layer is hijacked and somatic markers fail, the highest layer of the cognitive structure—the "Meaning" (language and symbol) layer—falls into a profound crisis. This is what this paper terms the "Language Concealment Effect."

In a healthy cognitive ecology, linguistic symbols should be the faithful expression and sublimation of embodied experiences and authentic emotions. However, in platform media dominated by Generative AI and algorithmic recommendations, linguistic symbols are massively produced, recombined, and distributed, completely detached from their original embodied anchors. LLMs can generate extremely fluent, logically rigorous, and even emotionally charged texts, but behind these texts, there is no authentic "somatic" experience or "emotional" foundation; they are purely symbolic games based on probability statistics [2].

This disembedded symbolic system not only fails to convey authentic meaning but becomes a tool to conceal the truth and distort cognition. The massive amount of information on platforms (including fake news, polarized speech, AI-generated synthetic content) acts like a thick fog, concealing individuals' perception of the real world. Language is no longer the "House of Being" [8], but degenerates into hollow clickbaits. Individuals immersed in these symbolic spectacles carefully choreographed by algorithms seemingly acquire massive information, but their inner meaning-making capacities are being hollowed out.

More seriously, this language concealment effect directly destroys the RID (Regulate-Imagine-Discover) cognitive generation model proposed by Zhang Xusheng [15]. In the RID model, healthy cognition should begin with the keen "Discovery" of "disequilibrium" in the real world, then "Imagine" new cognitive structures through imagination, and finally "Regulate" them into new rules or meanings through language and logic. However, under the language concealment of platform media, individuals are deprived of the opportunity to "Discover" problems in the real world (because algorithms have already pre-set problems and answers for you), their ability to "Imagine" structures is offloaded to LLMs, and the final "Regulation" degenerates into the mechanical copying of platform buzzwords or AI templates. The generative chain of cognition is completely broken, and individuals fall into a state of "organized immaturity" [10].

3.4 The Recursive Architecture of Cognitive Capture: A Systemic Analysis

The three mechanisms described above—progressive weakening through compensatory alienation, emotional hijacking, and language concealment—do not operate in isolation. They form a mutually reinforcing recursive architecture that systematically captures and redirects cognitive energy away from authentic meaning-making. Understanding this architecture is essential for designing effective counter-strategies.

At the first level, the platform's business model creates a structural incentive to maximise engagement, which is operationally equivalent to maximising emotional arousal. This incentive structure is not incidental but constitutive: it shapes every design decision, from the infinite scroll to the notification architecture to the algorithmic curation of content. The result is an environment that is, in the precise sense of Wang Dongyue's framework, a form of artificial compensation that exacerbates rather than ameliorates the underlying condition of existential fragility [12].

At the second level, the emotional hijacking mechanism exploits the very feature of human cognition that makes it

adaptive in natural environments: the priority of affect over deliberation. In contexts of genuine threat or opportunity, the somatic marker system's capacity to generate rapid, pre-reflective evaluations is a survival advantage. Platform media, however, simulate the conditions of urgency and social threat without the corresponding reality, triggering somatic responses that are physiologically real but referentially empty. The body responds to a viral tweet as if to a genuine social emergency, mobilising the same hormonal cascades and attentional resources that would be appropriate in a face-to-face confrontation. This physiological reality of algorithmically induced emotion is precisely what makes it so difficult to counter through purely cognitive means.

At the third level, the language concealment effect operates through what we might call the "semantic satiation" of public discourse. When LLMs can generate unlimited quantities of plausible, emotionally resonant text on any topic, the scarcity that once gave language its meaning-making power is abolished. Words that previously required embodied experience, emotional investment, and cognitive effort to produce now flow freely and cheaply from algorithmic sources. The result is not merely an abundance of information but a devaluation of linguistic meaning itself—a condition that Zhang Xusheng identifies as the terminal pathology of the "Meaning" layer when severed from its somatic and emotional roots [15].

Together, these three levels constitute what we propose to call the "Cognitive Capture Architecture" of platform media: a systemic structure that converts the human capacity for meaning-making into a resource for platform value extraction. Critically, this architecture is not experienced as coercive; it is experienced as pleasurable, engaging, and even empowering. This is precisely its most dangerous feature, and the reason why any adequate response must operate at the ontological rather than merely the informational level.

4 The Cognitive Reconstruction of Critical Media Literacy: From Information Critique to Ontological Reflection

Faced with the crisis of epistemic agency and the language concealment effect brought about by platform media, traditional instrumentalist media literacy education is no longer competent. This paper advocates that a thorough "cognitive reconstruction" of critical media literacy must be carried out based on Wang Dongyue's Progressive Weakening-Compensation Principle and Zhang Xusheng's three-layer cognitive structure. This reconstruction does not discard information skills but places them within a deeper "ontological reflection."

4.1 Rebuilding the Cognitive Stabilization Scaffolding

In Zhang Xusheng's theory, the healthy operation of the cognitive system relies on the establishment and maintenance of the "Stabilization Scaffolding" [15]. This scaffolding is composed of somatic perception, emotional regulation, and meaning-making. Platform media dismantle individuals' cognitive scaffolding by severing the connection among these three. Therefore, the primary task of reconstructing critical media literacy is to help individuals re-establish this scaffolding.

First, at the level of Somatic Perception, an "Embodied Media Practice" needs to be advocated. This means educators should guide students to pay attention to their physiological responses when consuming media content (such as fatigue caused by excessive screen time, anxiety or excitement triggered by algorithmic nudges). Through mindfulness training and body awareness, the sensitivity to "somatic markers" can be restored, making them the first line of defense against algorithmic emotional hijacking.

Second, at the level of Emotional Regulation, critical media literacy should shift from pure "information critique" to "Emotional Reflection." As He and Fan [7] suggest, interventions for filter bubbles should include "Reflective Reasoning Strategies" and address the emotional and identity foundations behind information selection. Educators should guide students to recognize how algorithms manipulate their attention and beliefs by triggering specific emotions (such as anger, fear, group identity), thereby establishing a "Buffer Zone" between emotional impulses and behavioral responses.

Finally, at the level of Meaning-Making, it is necessary to transcend the mechanical verification of facts and turn to the critique of "meaning generation mechanisms." Students should understand that whether it is fluent texts generated by LLMs or personalized content recommended by algorithms, they are just "symbolic collages" detached from authentic life experiences. True meaning-making must be re-anchored in individuals' embodied experiences and authentic social interactions. Through participatory community practices, deep face-to-face communication, and "Weak-tie Exposure" across filter bubbles [7], individuals can restore the complete cognitive capability of "Discover-Imagine-Regulate (RID)" in the real world.

In pedagogical terms, this three-dimensional reconstruction suggests a distinctive approach to media literacy instruction. Rather than beginning with information ("here is a piece of content; evaluate its credibility"), the reconstructed curriculum begins with the body ("notice what happens in your body when you encounter this content"), proceeds through emotion ("what does this somatic response tell you about your relationship to this content?"), and arrives at meaning only after this embodied and emotional groundwork has been laid. This sequence reverses the conventional order of media literacy instruction, which typically begins with cognitive analysis and treats emotional and somatic responses as noise to be filtered out. The reconstructed approach treats these responses as signal—as the primary data from which authentic critical engagement must begin.

This pedagogical approach resonates with recent developments in contemplative education, trauma-informed pedagogy, and somatic learning theory, all of which emphasise the impor-

tance of embodied awareness as a foundation for higher-order cognitive functioning. It also connects with the growing literature on "slow media" and "deep attention" [6], which argues that the cultivation of sustained, embodied attention is both a cognitive necessity and a form of cultural resistance in an era of algorithmic distraction. The cognitive reconstruction of critical media literacy thus represents not merely a curricular reform but a broader educational philosophy—one that insists on the irreducible importance of the embodied, emotionally grounded, meaning-making subject in an age that increasingly seeks to render such subjects superfluous.

4.2 Reclaiming Epistemic Agency: From Consumers to Creators

The ultimate goal of reconstructing critical media literacy is to help individuals reclaim "Epistemic Agency" in the era dominated by Generative AI and algorithms. This requires profound changes at the institutional and practical levels of the educational system.

As Stewart [11] points out in her analysis of Reddit higher education communities, the application of AI in education has triggered profound anxieties about power, labor, and authority. To counter this "organized immaturity" [10], educational institutions cannot merely passively formulate "anti-cheating policies" or teach "AI tool usage skills." Instead, AI should be viewed as an "object of critical inquiry," guiding students to deeply understand its underlying architecture, data sources, algorithmic biases, and its potential reshaping of knowledge production models.

In this process, media literacy education should encourage students to transform from passive "Algorithmic Consumers" to active "Epistemic Creators." This not only means cultivating their ability to critically use AI tools (such as guiding AI to generate more profound content through "Prompt Engineering" rather than simple copy-pasting) but also cultivating their ability to transcend AI—that is, to demonstrate humanity's unique cognitive value in areas AI cannot reach (such as embodied empathy, moral judgment, intuitive decision-making in complex contexts).

4.3 Institutional Conditions for Cognitive Reconstruction

The cognitive reconstruction proposed in this paper cannot be achieved through individual pedagogical interventions alone; it requires corresponding changes at the institutional and policy levels. Three structural conditions are particularly important.

First, temporal re-architecture: the cognitive stabilization scaffolding requires time—time for somatic perception to register, for emotional responses to be processed, and for meaning to crystallise through reflection and dialogue. Contemporary educational institutions, under the pressure of efficiency metrics and digital acceleration, have progressively compressed the temporal spaces that this process requires. Reconstructing critical media literacy demands a deliberate re-expansion of these spaces: longer, less fragmented class periods; assessment designs that reward depth over speed; and institutional cultures that valorise contemplative practice alongside analytical performance.

Second, spatial re-embodiment: the dominance of screen-mediated learning has progressively displaced the embodied, face-to-face interactions that anchor the somatic layer of the cognitive structure. Research on extended cognition suggests that the cognitive scaffolding provided by physical environments, material artefacts, and co-present social interactions is not merely supplementary but constitutive of higher-order cognitive processes [4]. Educational institutions committed to cognitive reconstruction must therefore resist the wholesale migration of learning to digital platforms and actively invest in the design of physical learning environments that support embodied inquiry, collaborative meaning-making, and the cultivation of somatic awareness.

Third, epistemic re-governance: the crisis of epistemic agency described in this paper is, at its root, a crisis of governance. The algorithmic systems that capture and redirect cognitive energy are not natural phenomena; they are the products of specific design choices, business models, and regulatory frameworks. Addressing this crisis requires not only individual and institutional responses but also collective political action: the development of regulatory frameworks that impose transparency requirements on algorithmic recommendation systems, that mandate algorithmic impact assessments in educational contexts, and that establish meaningful public oversight of the epistemic architectures through which platform media shape the cognitive environments of billions of people. As Lindebaum et al. [10] argue, the governance of LLMs in higher education must be understood as a question of epistemic justice, not merely of academic integrity.

4.4 Theoretical Limitations and Future Research Directions

This paper has developed a philosophical framework for understanding and addressing the cognitive effects of platform media, drawing on the ontological resources of Wang Dongyue's Progressive Weakening-Compensation Principle and Zhang Xusheng's three-layer cognitive structure. However, several important limitations must be acknowledged.

The framework developed here is primarily conceptual and philosophical. While it draws on empirical research to support its key claims, it does not itself generate empirical data, and its practical implications remain at a relatively high level of abstraction. Future research should develop more concrete, operationalisable pedagogical interventions based on this framework and subject them to rigorous empirical evaluation. In particular, longitudinal studies examining the effects of embodied media literacy interventions on students' somatic awareness, emotional regulation, and meaning-making capacities would be valuable.

Furthermore, the framework has been developed primarily in relation to the cognitive experiences of individuals in high-income, digitally saturated societies. Its applicability to different cultural contexts, different levels of digital access, and different educational traditions requires careful examina-

tion. Cross-cultural research that explores how the relationship between platform media, cognitive structure, and media literacy varies across different socio-cultural contexts would significantly enrich the framework.

Finally, the rapid pace of technological development means that the specific platforms and AI systems discussed in this paper will continue to evolve, potentially in ways that either exacerbate or ameliorate the cognitive effects described here. The framework's value lies not in its capacity to predict specific technological developments but in its provision of a stable ontological vocabulary for analysing the cognitive implications of whatever technological forms emerge.

5 Conclusion

In the digital ecology intertwined with Generative AI and platform algorithms, human cognition is facing an unprecedented ontological crisis. Traditional media literacy education, trapped in the rut of instrumentalism and rationalism, fails to effectively address the systematic deprivation of individuals' epistemic agency by algorithms through "emotional hijacking" and "language concealment." Based on Wang Dongyue's "Progressive Weakening-Compensation Principle" and Zhang Xusheng's "Three-Layer Cognitive Structure" and RID model, this paper offers a profound ontological diagnosis of this crisis.

The analysis developed in this paper has identified three interlocking mechanisms through which platform media erode the cognitive stabilization scaffolding: the progressive weakening-compensation alienation, which converts the existential fragility of the human condition into a resource for platform value extraction; the emotional hijacking mechanism, which exploits the somatic marker system's priority of affect over deliberation to manufacture algorithmically induced affective tribalism; and the language concealment effect, which severs the connection between linguistic symbols and their embodied anchors, reducing meaning-making to the passive consumption of algorithmically curated symbolic spectacles. Together, these mechanisms constitute a "Cognitive Capture Architecture" that operates not through coercion but through the engineering of pleasure, engagement, and apparent empowerment.

In response to this diagnosis, this paper has proposed a three-dimensional cognitive reconstruction of critical media literacy: the restoration of somatic perception through embodied media practice; the deepening of emotional reflection through affect-centred pedagogy; and the rebuilding of meaning generation through participatory community engagement and weak-tie exposure across filter bubble boundaries. This reconstruction is supported by three institutional conditions: temporal re-architecture to create the spaces that authentic meaning-making requires; spatial re-embodiment to restore the physical learning environments that anchor the somatic layer of cognition; and epistemic re-governance to address the structural and political dimensions of algorithmic cognitive capture.

This reconstruction is not only a profound reflection on the current educational paradigm but also a philosophical response to how humanity can maintain subjectivity and existential dignity in a highly technological future. The framework developed here insists that the human capacity for embodied, emotionally grounded, authentic meaning-making is not a cognitive luxury to be sacrificed in the name of efficiency or technological progress, but the irreducible foundation of human flourishing and democratic life. Future research should further explore how to implement this reconstruction scheme in specific educational practices, especially in cross-cultural contexts and different age groups, and how to design effective embodied media intervention strategies to truly realize the leap from "organized immaturity" to "cognitive autonomy."

References

[1] M. Ahmmad, K. Shahzad, A. Iqbal, and M. Latif, "Trap of social media algorithms: A systematic review of research on filter bubbles, echo chambers, and their impact on youth," *Societies*, vol. 15, no. 11, p. 301, 2025.

[2] E. M. Bender, T. Gebru, A. McMillan-Major, and S. Shmitchell, "On the dangers of stochastic parrots: Can language models be too big?" in *Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency*, 2021, pp. 610–623.

[3] W. Brown, *Undoing the Demos: Neoliberalism's Stealth Revolution*. New York: Zone Books, 2015.

[4] A. Clark, "Extending minds with generative ai," *Nature Communications*, vol. 16, no. 1, p. 4627, 2025.

[5] A. R. Damasio, *Descartes' Error: Emotion, Reason, and the Human Brain*. New York: G. P. Putnam's Sons, 1994.

[6] N. K. Hayles, "Hyper and deep attention: The generational divide in cognitive modes," *Profession*, vol. 2007, no. 1, pp. 187–199, 2007.

[7] S. He and Y. Fan, "Emotion as a cross-layer mechanism in filter bubbles: A social-psychological perspective," *Frontiers in Psychology*, vol. 16, p. 1740709, 2025.

[8] M. Heidegger, *Being and Time*. New York: Harper & Row, 1962.

[9] F. R. Leavis and D. Thompson, *Culture and Environment: The Training of Critical Awareness*. London: Chatto & Windus, 1933.

[10] D. Lindebaum, E. Nolan, M. Ashraf, G. Islam, and M. F. Ramirez, "The transformation of epistemic agency and governance in higher education through large language models: Toward a future of organized immaturity," *Organization Studies*, p. 01708406251392002, 2025.

[11] O. G. Stewart, "A critical ai media literacy perspective on the future of higher education with artificial intelligence through communities of practice on reddit," *AI in Education*, vol. 2, no. 1, p. 5, 2026.

[12] D. Wang, *Wu Yan Tong Lun [The General Theory of Evolution]*, 3rd ed. Xi'an: Shaanxi People's Publishing House, 2009, original Chinese title: 物演通论; English title is a descriptive translation retained for manuscript continuity.

[13] T. Yu, C. Wei, M. Na, and S. S. Alam, "Enhancing media literacy to combat information fragmentation in digital short video platforms: A cross-sectional study," *Scientific Reports*, vol. 16, no. 1, p. 203, 2025.

[14] T. Zhang, Z. Wang, and X. Zhang, "A three-layer cognitive structure theory of "soma-emotion-meaning" based on embodied cognition: Integrating somatic marker hypothesis and progressive weakening-compensation principle—an integrative framework for understanding autism spectrum disorder and depression comorbidity," *EAI Endorsed Transactions on Pervasive Health and Technology*, vol. 11, 2026.

[15] X. Zhang, "Knowing and saying: An ontological investigation of human cognition," PSSXiv (Philosophy and Social Sciences Preprint Server), may 2026, pSSXiv:202605.04152V1; CSTR:32012.36.PSSXiv.202605.04152. [Online]. Available: https://zsyyb.cn/abs/202605.04152