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Reconstructing the Communication Ecology: A Case-Based Three-Stage Evolutionary Model of AIGC Roles

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Abstract. This study investigates how Artificial Intelligence-Generated Content (AIGC) reshapes communication by moving beyond traditional media frameworks. Building on McLuhan's media theory, participatory culture, and Human-Machine Communication (HMC), the research develops a three-stage evolutionary model that conceptualizes AIGC as "Other," "Environment," and "Dialogue Partner." Through case studies of AI-generated covers on YouTube, AI ASMR videos, and Xiaohongshu's interactive translation hashtag, the analysis demonstrates how AIGC evolves from a passive content factory to a perceptual regulator and finally to a co-creative partner. This transformation highlights a redistribution of agency between humans and AI, challenges conventional notions of authorship and originality, and extends media from bodily extensions to imaginative and symbolic interaction. The study contributes a new theoretical lens referring to "the medium as actor", and underscores both the opportunities and ethical challenges of human–machine symbiosis in the age of AIGC.

Keywords: Artificial Intelligence-Generated Content (AIGC), Human–Machine Communication, Media Theory, Co-creation, Symbolic Interaction, Participatory Culture

1. Introduction

The rise of Artificial Intelligence-Generated Content (AIGC) has ushered in a new era in media history, reshaping how communication is understood. AIGC systems, such as GPT models, generative art platforms, and AI-driven video tools, are capable of producing, adapting to, and interacting with content in real time. In this context, the traditional distinction between "medium" and "message" becomes blurred. AI is no longer only a channel but also a creator and, increasingly, a participant in communication.

This transformation requires a re-examination of communication theory. Traditional frameworks struggle to account for media that generate and interact with content directly, as the concept of "media" now encompasses entities that act as both creators and communicators. This shift destabilizes conventional notions of authorship and agency redefining the boundaries between humans and machines in communicative processes.

This study addresses a gap in communication research by examining how AI-generated content (AIGC) reshapes media theory. Prior work has emphasized media as a human extension and participatory culture, yet little explored little about AIGC's evolving role. This research situates

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AIGC within Human–Machine Communication (HMC). It introduces "lukewarm media," a hybrid form blending the high-definition closure of hot media with the participatory openness of cool media. Beyond viewing AIGC as a tool, the study proposes a three-stage model—watching, participating, and co-creating—that illustrates how AIGC evolves into an active communicative actor, transforming media into extensions of thought, imagination, and sensory experience.

The study aims to analyze how AIGC redefines communication, with a particular focus on the evolving role of media. As AI assumes functions once performed by human communicators, the boundaries between content, creator, and medium become porous. This project examines how these changes affect human identity, agency, and ethics with the digital communication ecosystem.

2. Literature review

2.1. Evolution of media theory and the foundations for AIGC research

Marshall McLuhan's dictum that "the medium is the message" and his distinction between "hot" and "cool" media underscore how technologies shape perception through both form and content [1]. However, these frameworks, grounded in static and one-directional media, cannot fully explain the hybrid and interactive qualities of AI-generated content (AIGC). Jenkins's theory of participatory culture highlights how users simultaneously consume and produce media within collaborative environments [2,3]. AIGC extends this trajectory by enabling co-creation with AI systems, as seen in platforms like ChatGPT, where outputs emerge through the interplay of human prompts and machine generation, blurring the boundary between creators and audiences.

2.2. Recent advances in AIGC research

Recent scholarship frames AIGC within Human–Machine Communication (HMC), positioning AI not only as a tool but also as a communicative actor. Guzman and Lewis argue that AI's generative capacity challenges the traditional boundary between human communicators and technological mediums [4]. This perspective aligns with Actor–Network Theory (ANT), which treats both human and non-human entities as participants in shaping communication networks [5]. AIGC therefore functions as a networked actor, influencing meaning through its generative and interactive roles.

Empirical research highlights how AIGC reshapes social media practices. Vargas demonstrates that AI-generated content can increase user engagement on platforms such as TikTok and Instagram by aligning with algorithmic trends [6]. At the same time, Wang emphasizes the challenges related to authenticity, privacy, and transparency [7]. These findings underscore the dual nature of AIGC: it expands participatory communication and enhances efficiency, while also raising ethical concerns that demand sustained scholarly attention.

3. Analytical framework: the three-stage evolution of AIGC and the construction of the "medium as actor" theory

This chapter outlines a three-stage evolutionary model that conceptualizes how AIGC shifts from a passive content generator to an active participant in communication. The model identifies three roles —"the Other," "the Environment," and "the Dialogue Partner"—each representing a progressive stage in the transformation of media functions. These categories capture the dynamic process through which AIGC moves from externalized production to immersive regulation and finally to reciprocal co-creation. The framework thus establishes the foundation for the "Medium as Actor"

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theory, highlighting the redistribution of agency between humans and machines in contemporary communication.

3.1. First stage: AIGC as the "other" – the spectator mode ("hot medium")

In this first stage, AIGC functions as a "hot medium". At this point, the AI creates content to serve the user, and the user remains a passive spectator. The user receives information passively, while the AI, as the "other," provides sufficient data to be processed without requiring much engagement from the user.

The model frames AIGC as a high-tech content generator, delivering highly structured, informative content, with little to no user participation. Theoretically, it reflects McLuhan's hot media, such as radio, which fills the audience's senses with information, leaving less room for interaction or interpretation [1]. As the AIGC technology matures, it shifts from being solely about content creation to controlling the environment in which users are immersed.

3.2. Second stage: AIGC as the "environment" – the participant mode ("lukewarm medium")

The second stage marks a transition from a purely passive spectator role to an interactive one, where AIGC functions as a "lukewarm medium". This stage reflects the "environment" aspect of media, as conceptualized by media ecology theory. Media ecology views media not merely as channels of communication, but as environments that shape how humans perceive and interact with the world [8]. The idea of "media as environment" has its roots in the work of theorists like Neil Postman, who suggested that media are complex systems that structure our understanding and perception of the world [9].

In the context of AIGC, this means that the AI-generated content itself creates an environment that subtly immerses the user. The "environment" here refers to the media landscape that AIGC constructs through its interactions with the user. This environment is not passive; it actively shapes the way users process information. Unlike traditional content, where the user is a passive receiver of data, AIGC invites the user into an environment where the boundaries between passive reception and active participation become blurred. While the user may not be fully engaged in content creation at this stage, they are interacting with the content in a way that shapes their perception and understanding. The AI, in this sense, is not just providing information; it is shaping the user's cognitive, emotional, and imaginative responses.

This shift from a hot to a lukewarm medium illustrates how AIGC transforms into an environment that actively participates in communication. Within this stage, AIGC combines these dimensions: it does not merely transmit information but creates immersive environments that influence perception, cognition, and emotion. Users are therefore not passive recipients but participants in an ongoing process of meaning-making, interpreting, and responding to the symbolic landscape shaped by AI.

In this sense, AIGC functions as part of a broader communicative ecosystem. By constructing an information environment that both immerses and guides, AIGC emerges as a perceptual-regulating medium, actively shaping how communication unfolds and how individuals understand themselves within it.

Thus, this stage of AIGC as a lukewarm medium or "environment" introduces a deeper level of interaction than a hot medium. While still somewhat passive, it opens up the possibility for indirect participation, as the user engages with the medium in a way that influences their perception and understanding of the content. This transformation from hot to lukewarm media is a critical moment

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in the evolution of AIGC, as it reflects the broader shift from a simple tool to a dynamic participant in the communication process, creating a space where the user and AI coexist and interact.

3.3. Third stage: AIGC as the "dialogue partner" – the co-creation mode ("cool medium")

In the third and final stage of the evolutionary model, AIGC transforms into a "cool medium"—the co-creation mode, where the interaction between the user and the AI becomes more profound and symbiotic. This stage reflects a significant shift in the role of AIGC from a passive tool to an active dialogue partner. Unlike traditional communication models where media serve primarily as information channels, AIGC, at this stage engages users in a two-way dialogue, with the AI not only responding to user inputs but also actively shaping the content through interaction.

The concept of "dialogue partner" in this context refers to a medium that facilitates an ongoing, interactive exchange between the user and the AI. Unlike "hot" and "lukewarm" media, which are more focused on delivering information or shaping environments, AIGC as a dialogue partner, invites the user into a participatory and creative process. This shift is an extension of the idea that communication is no longer a linear process but a dynamic exchange in which both participants contribute to the creation of meaning.

This model resonates with McLuhan's idea of the "tribal man" in the age of electronic media. According to McLuhan, the tribal man is shaped by the collective nature of electronic communication, where individuals live in a "retribalized society", immersed in a constant flow of shared information. In contrast to the "literary man" of the print age, who developed private viewpoints and individualism through solitary reading, the tribal man's identity is deeply embedded in the collective, communal experience, where group identity prevails over personal isolation [10].

However, in the context of AIGC as a dialogue partner, a "detribalized man" is emerging. This concept of the detribalized man refers to the individual who, although living in a highly connected and communicative society, now seeks personal isolation and autonomy in the face of pervasive technology. In the age of AIGC, this individual's experience is shaped by a personalized flow of information. Each interaction with AI generates content that is uniquely tailored to the user's preferences, thoughts, and desires, providing them with an experience that is far more individualized than the tribal collective shared by McLuhan's concept. The "detribalized man" is no longer bound by the collective flow of media, but seeks a more individualized and customizable experience in communication.

As AIGC evolves into this medium, it requires intense participation from the user. The interaction with AIGC is not just about receiving content but about co-creating it, where the user is actively involved in shaping the flow of information. The process becomes an act of creation, not just consumption. This aligns with the notion that dialogue is inherently a two-way process, where both parties contribute to the formation of meaning. In the case of AIGC, the machine is no longer merely a passive tool; it is an active participant in the creation of content, responding to user input in real-time and adapting to the context of the conversation.

3.4. Integrating the model: core definitions, evolutionary logic, and how to demonstrate it

The evolution of AIGC aligns with the concept of the "Medium as Actor", where the medium transitions from being a passive content generator to an active participant in communication. In this model, AIGC moves through three progressively complex roles: as an "Other" that supplies high-definition outputs to passive spectators, as an "Environment" that immerses users in a multimodal and perceptual field where meaning is co-produced indirectly, and as a "Dialogue Partner" that co-

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creates content in an iterative, turn-taking process. These definitions highlight a shift from system-centered agency to distributed agency, and finally to a reciprocal human–machine coupling where personalization and co-authorship dominate.

The evolutionary nature of these stages can be explained through what may be termed a "cooling-down" principle. AIGC tends to move from exclusionary, finished forms (hot) toward increasingly inclusive and participatory forms (cool). This trajectory is reflected in four monotonic transitions: from passive reception to active participation; from high-definition closure to open-ended scaffolds; from batch delivery to synchronous feedback; and from tool-centric control to symbiotic agency. The driving forces behind this cooling process lie in technological affordances (real-time generation, multimodality), economic and platform incentives that reward engagement, and cultural expectations for interactivity and personalization.

This evolutionary logic directly supports the "Medium as Actor" theory. Through its three-stage role transition, AIGC enables the progressive redistribution of agency in the communication process, reshaping human-machine communication while emphasizing its growing role as a co-creator and dialogue partner.

In summary, the model is not merely a taxonomy of AIGC's roles but also reveals a historical tendency: the redistribution of agency in communication away from the system alone and toward a dynamic, human–machine symbiosis.

4. Case analysis: from content factory to environment to dialogue partner — the three-stage evolution of AIGC

4.1. First-stage model analysis: AIGC as content factory and the "other"

The rise of AI-generated singers and AI covers on YouTube illustrates how AIGC operates in the first stage of the model as an "Other." At this stage, the system operates like a performer external to the audience, producing polished outputs that are consumed in a largely passive way. Viral examples such as the "AI Justin Bieber cover shown and the "AI Ariana Grande cover" shown in Figure 1 demonstrate that AI can convincingly reproduce the timbre, rhythm, and affect of real artists, delivering a complete product with minimal interpretive effort from viewers.

The scale of this phenomenon is itself significant. On YouTube, the hashtag #aicover already aggregates over 396,000 videos across 143,000 channels, making it a substantial cultural trend rather than a marginal experiment. Such content production satisfies the spectatorial desire and curiosity of audiences: fans can now hear their favorite stars' voices perform songs they never covered in real life. This enriches the repertoire of cultural "materials" available to fans, extending the symbolic presence of the star beyond the boundaries of their actual career.

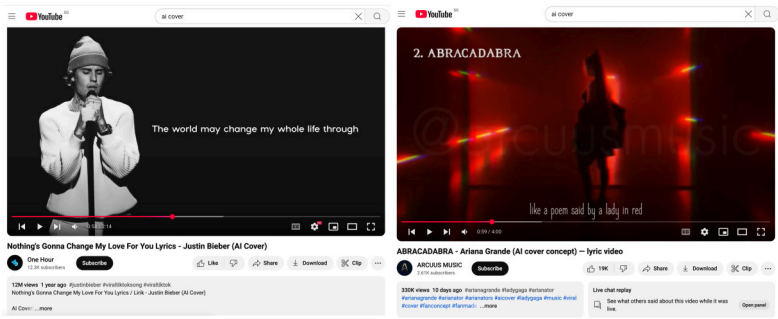

Figure 1. Case of "AI Justin Bieber and Ariana Grande cover" on YouTube [11,12]

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From the perspective of "the medium is the message," these AI singers reveal how the medium itself—not merely the reproduced songs—carries cultural and social meaning. The AI cover is not simply "content" but a message about mediation itself: it demonstrates that artistic voice and authorship can be algorithmically simulated, thereby destabilizing the boundaries of originality and creativity. This resonates with McLuhan's idea of hot media: like radio or cinema, AI-generated covers fill the senses with high-resolution sound, leaving minimal room for the audience to intervene. What matters here is not only the song itself but the shock of realization—that the "singer" is no longer a human subject but an algorithmic other.

This mode also illustrates the blurring of creative subjectivity. When an AI voice convincingly performs as Ariana Grande or Justin Bieber, authorship becomes dispersed across multiple agents: the dataset, the model, the programmer, the fan who uploads the video, and the audience that legitimizes it through millions of views. The system appears as an autonomous entity performing for spectators, while the hidden labor of training, curation, and intervention remains concealed.

The viral success of AI cover singers, therefore, provides evidence for the first stage of the AIGC model. AIGC operates as a content factory that delivers completed products for consumption, reproducing the dynamics of passive spectatorship while destabilizing traditional assumptions of authorship and originality. It first emerges as an "Other" before moving toward more interactive and participatory roles.

4.2. Second-stage model analysis: AIGC as perceptual regulator and "environment" - the blending of hot and cool, and the extension of imagination

A representative case of the second stage of AIGC is AI-generated ASMR videos, which have become popular on platforms such as YouTube and Xiaohongshu. These videos illustrate the transition from passive content consumption to immersive sensory engagement. AIGC here acts as a perceptual regulator, constructing environments where users not only watch or listen but also subtly participate. The blend of "hot" and "cool" qualities is visible: high-definition, visually striking content is combined with open-ended, interactive elements that stimulate imagination and emotion.

On YouTube, for example, an AI ASMR channel with over 355,000 subscribers, shown in Figure 2, produces meticulously generated sounds and visuals. Its videos focus heavily on cutting rituals (e.g., raspberries, crystals) and surreal visuals (e.g., beds sculpted from bread or watermelon, oil paintings transformed into 3D objects). These clips combine the structured intensity of high-resolution images with imaginative possibilities that invite viewers to project themselves into the scenario. This fusion of hot (highly structured and visually engaging content) and cool (where the user interacts with the environment and is emotionally affected by the sensory input) is key to understanding the evolution of AIGC.

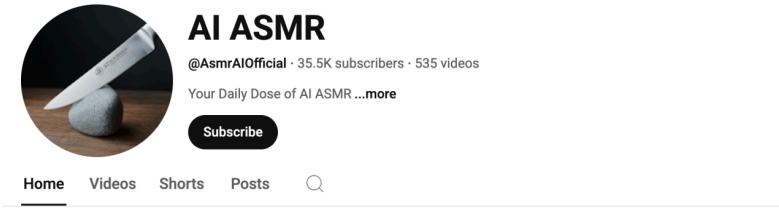

Figure 2. The AI ASMR channel on YouTube, with over 35.5K subscribers [13]

The appeal of these videos extends beyond sensory satisfaction. They regulate emotions by offering calming experiences, aligning with the broader use of ASMR as a stress-relief tool [14]. On

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Xiaohongshu, the popular hashtag “AI助眠” (AI Sleep Aid) gathers similar content: cutting plush toys, constructing impossible dreamlike spaces, and crafting whimsical objects. These examples show how AIGC enables not only provides sensory pleasure but also facilitates emotional regulation and escape, thereby meeting the growing demand for soothing and immersive digital experiences.

This stage exemplifies the extension of imagination. AI-generated ASMR often transcends realism, presenting scenarios that defy physical existence — such as fantastical cutting rituals, oversized food beds, or dreamlike landscapes. Users are not entirely passive; by selecting and engaging with these cues, they become participants in shaping the perceptual environment constructed by AI.

Such cases demonstrate how AIGC functions not only as a content provider but also as a “medium-environment.” In AI-generated ASMR, the medium itself structures perceptual landscapes: extending users’ imagination, guiding their cognitive and emotional states, and helping them reduce stress, achieve relaxation, and enhance emotional stability [15]. In this phase, AIGC evolves into an environment that actively shapes user experience, supports emotional health, and broadens the imaginative possibilities of digital media.

4.3. Third-stage model analysis: AIGC as symbolic interaction and co-creation with the “dialogue partner” — AI hot medium

A clear example of the third stage of AIGC is in the Xiaohongshu hashtag #我被翻译成了 (I am translated to...), as shown in Figure 3, which has garnered over 370 million views and 23.7 million discussions. Unlike earlier stages where AI primarily delivered polished content, this trend shows how AIGC becomes a partner in dialogue, enabling co-creation and identity play. Posts often invite users with prompts such as “Click here to translate your unique code,” encouraging them to interact with AI not as passive receivers but as active collaborators in the creative process.

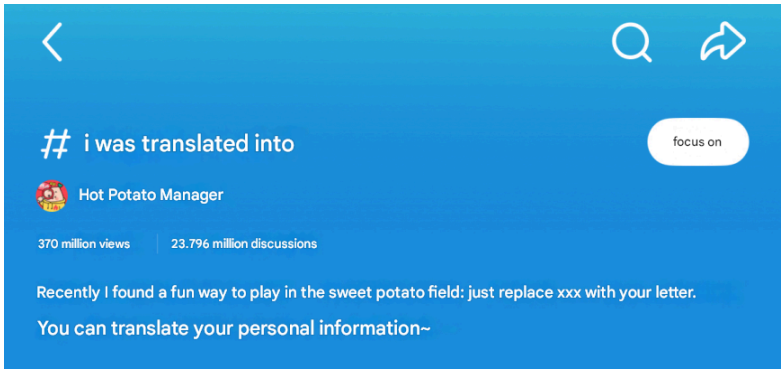

Figure 3. Xiaohongshu hashtag I am translated to [15]

In practice, users can generate a unique translation of their own attributes. The core activity involves users submitting personal statements such as “I am xxx.” Then the AI generates exclusive symbols (such as flowers and spirit animals) or creates narratives (like a villain’s backstory) based on this input or invents a past life, as shown in Figure 4. Through this process, meaning emerges dynamically: users provide inputs, and AI produces personalized outputs that are then shared and discussed, blurring the line between individual expression and algorithmic imagination.

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Figure 4. The 'game' of generating a villain lead on Xiaohongshu

This interaction highlights how symbolic meaning is co-constructed. The user's input serves as the trigger for AI's customized responses, while the AI's customised reshapes how users perceive themselves or present their identities to others. Functions as an identity game, this process allows users to explore new roles, attributes, or stories through their collaboration with AI. Instead of consuming finished products, users become co-creators, weaving personal and cultural narratives together with machine-generated elements.

From the perspective of actor-network theory: humans and AI are bound in a feedback loop of continuous exchange [5]. The AI is not a passive tool but an interactive partner that adapts to and shapes the evolving dialogue. This iterative process exemplifies the "cool medium" attribute of AIGC in the third stage. Rather than delivering content for passive consumption, the medium facilitates participatory meaning-making, where the identities, desires, and imaginations of users are expressed and expanded in dialogue with AI. The hashtag #I am translated to demonstrates how AIGC transitions into a dialogue partner, enabling a symbiotic relationship in which human and machine collaborate to generate new forms of symbolic experience.

5. Discussion

These developments underscore a profound reconfiguration of media, where Artificial Intelligence-Generated Content (AIGC) functions not merely as a tool but as an active agent in communication. As AI increasingly automates the realm of the aesthetic, it reshapes the cultural landscape and introduces new dynamics of symbolic production [16]. Media thus shift from passive conduits of information to actors that extend human imagination, regulate perception, and shape processes of identity construction.

This transformation challenges anthropocentric assumptions in communication theory, moving from technologies that people talk through to communicators that people talk with [17]. Within this shift lies a redistribution of communicative agency: meaning emerges through reciprocal processes of human–machine interaction rather than through unilateral authorship. Such redistribution complicates traditional distinctions between creator, medium, and audience, highlighting the fluid and co-constructed nature of contemporary symbolic life.

6. Conclusion

This study extends McLuhan's media framework, contributes to Human–Machine Communication, and introduces the notion of "lukewarm media" as a hybrid form that combines the closure of hot media with the openness of cool media. It analyzes how AIGC transforms communication through a

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three-stage evolutionary model: first as a content factory and "Other," then as a perceptual environment, and finally as a symbolic dialogue partner. Case analyses to demonstrate how AIGC evolves from delivering polished outputs to regulating perceptual environments and co-creating symbolic meaning.

The study further highlights both opportunities and risks: while AIGC enhances creativity, emotional regulation, and identity play, it also destabilizes authorship, raises ethical concerns, and demands new media literacies.

Nevertheless, this research has limitations. The scope of case studies is culturally and platform-specific, focusing mainly on YouTube and Xiaohongshu, which may not capture the full diversity of global practices. In addition, the framework remains theoretical and interpretive, necessitating further empirical validation through user-centered studies and cross-platform comparisons.

Future research should therefore investigate AIGC's role across different cultural contexts, explore longitudinal changes in user–AI co-creation practices, and evaluate ethical challenges such as authorship, transparency, and accountability. By doing so, scholarship can better assess the evolving balance of agency between humans and machines and refine theoretical models that capture the complexities of human–AI symbiosis.

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