From Cultural Perception to Meaning Co-Creation: Analyzing Overseas Players' Cultural Perception Pathways in Black Myth: Wukong

Liang Zhang[1] & Yunjun Zhang[1]

[1] College of Literature and Media, Jingchu University of Technology, China

Correspondence: Liang Zhang, College of Literature and Media, Jingchu University of Technology, Jingmen, Hubei 448000, China E-mail: Ztutustrong@163.com

Abstract

As a burgeoning medium for global cultural dissemination, video games possess both narrative and immersive affordances. Yet, their actual impact on cross-cultural communication remains underexplored. This study focuses on Black Myth: Wukong, China's first AAA video game, and analyzes 18,916 English-language reviews from the Steam platform using Latent Dirichlet Allocation (LDA) topic modeling and GoEmotions sentiment analysis. From the perspective of players, the research uncovers three major findings: (1) Players' perception centers on combat design and gameplay difficulty, where high-challenge mechanics enhance immersion and enable cultural engagement; (2) Chinese cultural elements elicit both aesthetic admiration and interpretive confusion, revealing a psychological tension between curiosity and alienation; (3) Through social interaction and user-generated content, players actively participate in cultural negotiation and meaning co-creation, thereby fostering intercultural identification. This study offers a player-centered perspective on the complexities of cultural transmission via Chinese "Souls-like" games, providing both theoretical insight and empirical support for the internationalization of Chinese digital games.

Keywords: cross-cultural communication, cultural perception, sentiment analysis, cultural adaptation, Black Myth: Wukong

1. Introduction

In recent years, the Chinese government has increasingly emphasized the cultural expression and international dissemination function of digital games. In November 2023, the National Press and Publication Administration of China issued a directive titled Online Game Publishing Excellence Project, calling for domestically developed games to "benchmark international standards" and integrate creativity, aesthetics, audiovisual quality, and Chinese cultural elements into high-quality productions [1]. In 2023 alone, overseas revenue from Chinese-developed games reached USD 16.366 billion, surpassing 100 billion yuan for the fifth consecutive year [2]. While Chinese mobile games have established a strong global presence, the market for high-cost, high-tech console and AAA games has remained largely untapped. The official release of Black Myth: Wukong in 2024, as China's first AAA title, marks a significant breakthrough into the high-end international market, creating a new platform for cultural dissemination.

Black Myth: Wukong draws on the Chinese classical novel Journey to the West as its narrative core, fusing mythological storytelling with fantasy aesthetics. Built using Unreal Engine 5 with ray tracing and motion capture technologies, the game offers an immersive Eastern world. As early as 2020, its initial gameplay reveal went viral on both Chinese and international platforms—garnering over 10 million views within 24 hours on Bilibili and similarly high engagement on IGN's YouTube channel. Upon its release in 2024, the game topped the global Steam sales chart, with over 1.25 million concurrent players and more than 1.1 million reviews, creating a substantial base of user-generated content and feedback that offers rich data for cultural perception analysis.

As a digital medium, games are inherently immersive, interactive, and emotionally engaging, making them a critical vehicle for projecting Chinese culture abroad[3]. Scholars have long explored the semiotic and aesthetic transformation of traditional culture in games, noting that their audiovisual styles, narrative structures, and interactive logic share expressive paradigms with film and literature, giving games unique storytelling capacities. Furthermore, immersive gameplay and participation in "third social spaces" within games help dissolve cultural

barriers [4]. However, games also face the "cultural discount" dilemma common to cross-cultural media, wherein fragmented information[5], interpretive autonomy, and cognitive biases among players can hinder cultural comprehension[6].

Existing studies on Black Myth: Wukong have mainly focused on its narrative symbolism, cultural representation, and media hybridity. Yet few have examined the actual feedback from real user communities, especially overseas players, regarding their cultural perceptions. There is a particular lack of research on the pathways through which international players experience, interpret, and emotionally respond to the game's cultural content. Given that game reviews are organic reflections of players' post-immersion reactions, often rich in interactivity and emotional nuance, this study uses over 40,000 foreign-language (non-Chinese) comments collected from Steam as the primary dataset. Combining LDA topic modeling and sentiment analysis, this research explores how international players perceive the game's cultural elements, express their emotional responses, and participate in the negotiation and co-creation of cultural meaning. The goal is to reveal the mechanisms underlying cross-cultural reception of Chinese AAA "Souls-like" games, thereby offering empirical evidence and theoretical insights to support China's global gaming strategy.

2. Research Methodology

2.1 Data Collection and Processing

This study uses the Steam platform as the data source. As one of the world's largest digital game distribution platforms, Steam hosts over 35 million concurrent users and more than 11 million active daily players, making it both representative and globally relevant. The dataset comprises foreign-language (non-Chinese) reviews of Black Myth: Wukong posted on Steam as of April 2025. Initially, 40,513 reviews were collected. After excluding 9,554 non-relevant entries (e.g., Chinese-language reviews and those with less than one hour of gameplay), a total of 18,916 valid review texts were retained. Table 1 illustrates sample data, including username, recommendation status, gameplay duration, and review content. While the recommendation flag offers a basic indicator of sentiment, it fails to capture the complexity of players' emotional responses.

Table 1. Sample Records from the Black Myth: Wukong Steam Review Dataset

| No.	Username	Recommended	**Review Excerpt**	**Playtime**
1	itsKenser	Recommended	I suck at it and I still like it. Pretty sure everyone will say the same.	4.5 hrs
2	Why'sss	Recommended	This game reminds me of when I watched *Journey to the West* on VTV2...	29.5 hrs
...	...	……	...	...
18915	ExaltedParrot	Recommended	After 10 hours, I have a few words to share. Pros: The game cannot look better.	71.7 hrs
18916	TheMightyGordo	Recommended	First impression: GOTY 2024. Unbelievable visuals and combat...	10.5 hrs
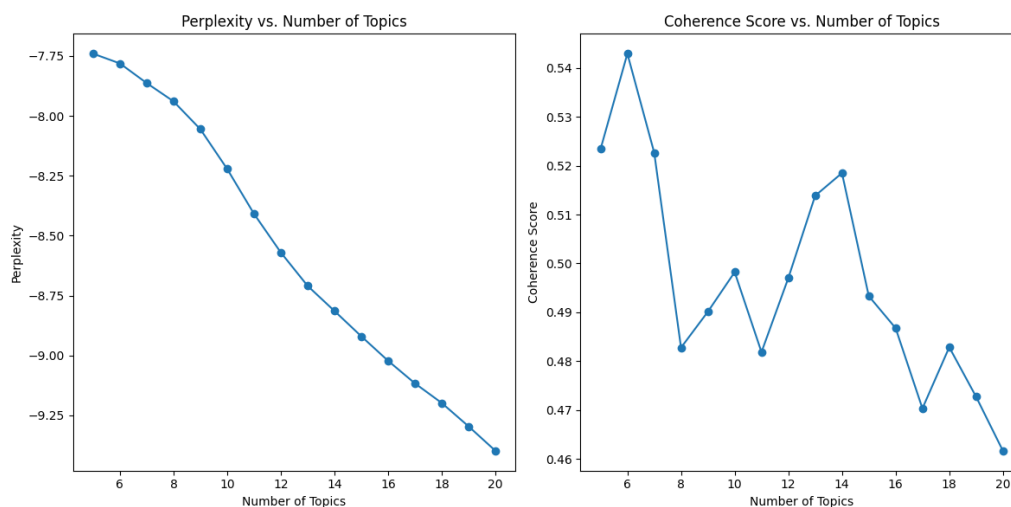
Figure 1. LDA Model Perplexity and Topic Coherence Evaluation

2.2 Data Analysis

To ensure both model robustness and interpretability, the number of topics in the LDA model was determined based on two key indicators: topic coherence and perplexity. The model achieved optimal coherence when the number of topics was set to six (see Figure 1). These six topics form the basis for analyzing the players' perception focus and pathways of cultural cognition. To further explore emotional dynamics, sentiment distribution was analyzed across all topic categories using a multilabel approach.

All 18,916 reviews were preprocessed using natural language processing tools such as NLTK and spaCy. Preprocessing steps included lowercasing, punctuation removal, stop-word filtering, and lemmatization using WordNet. To enhance domain specificity, a customized dictionary of named entities was incorporated, including terms such as "Wukong," "Black Myth: Wukong," "Journey to the West," "Monkey King," and "Black Monkey." A combined stop-word list from NLTK and manually defined game-specific terms was also applied to improve lexical precision.

Next, TF-IDF vectorization was used to extract textual features for topic modeling. Using the LatentDirichletAllocation module from sklearn, LDA modeling was performed on the cleaned dataset. The six topics were identified based on representative keywords and a close reading of exemplar reviews. These topics were labeled as follows:Combat Design Perception; Challenge & Difficulty Perception; Character Construction Perception; Cultural Symbolism Perception; Technical Performance Perception; Personal Engagement Perception.

To uncover emotional patterns within player discourse, the study further employed the GoEmotions model, a multilabel fine-grained emotion classifier built on the BERT architecture. The model supports 27 discrete emotion categories, including admiration, surprise, joy, confusion, disappointment, and anger. For each review, the first 512 characters were processed to generate multilabel emotion tags. Emotion frequency distributions were then calculated for each topic, and a topic-emotion heatmap was constructed to visualize emotional variance across content dimensions.

By integrating LDA-based thematic analysis and GoEmotions-based sentiment classification, this methodology enables a comprehensive examination of how international players engage cognitively and emotionally with Black Myth: Wukong, shedding light on their cultural perception pathways in the context of digital gameplay.

3. Findings

3.1 Player Perception Themes Based on LDA Topic Modeling

Using LDA-based thematic analysis, player comments were categorized into six primary perception themes. These themes represent key focal points of user engagement and cognitive processing during gameplay. Table 2 presents selected high-frequency keywords for each topic.
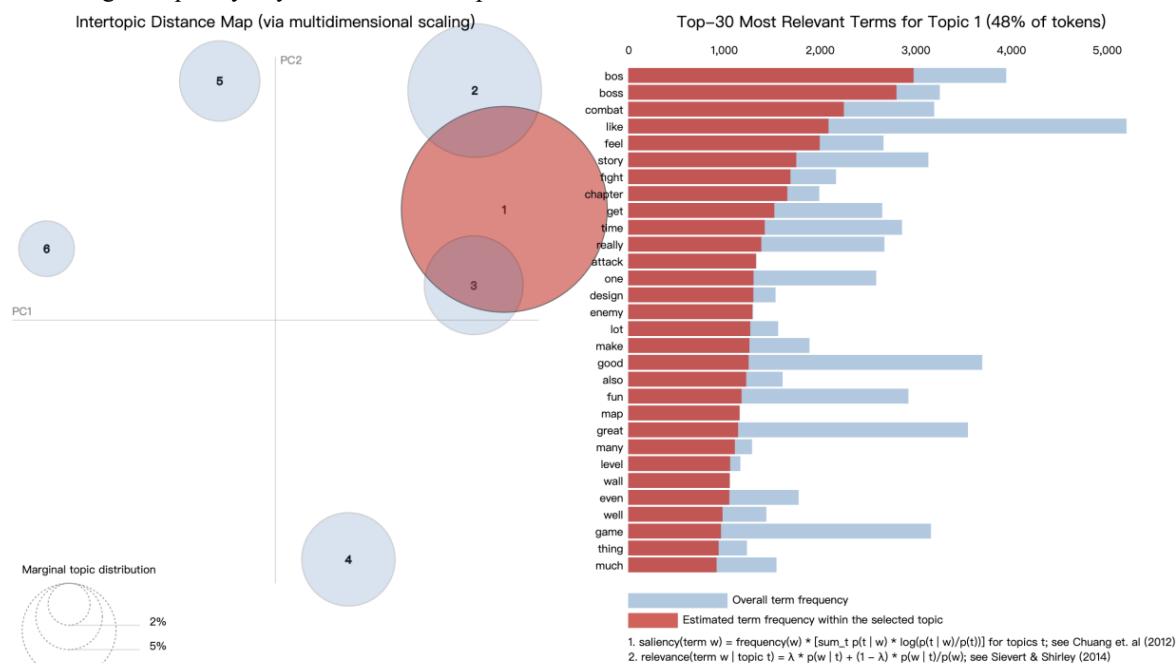

Figure 2. Semantic Mapping of Player Perception Themes

Table 2. Player Perception Themes and Representative Keywords

No.	Theme	Representative Keywords
1	Combat Design Perception	boss, combat, story, chapter, design, enemy
2	Challenge & Difficulty	soul, game, play, elden ring, hard, boss, beat
3	Character Construction	great, year, monkey, graphic, GOTY, masterpiece
4	Cultural Symbolism	wukong, myth, chinese, journey to the west, black
5	Technical Performance	setting, issue, fps, performance, crash, frame
6	Personal Engagement	long, life, grind, bug, spare, brain

3.1.1 Combat and Challenge: Salient Perceptual Focuses for Player Engagement

As shown in Figure 2, the visualization results of LDA topic modeling display the semantic distribution of six major themes. Among them, Topic 1 (combat design perception), Topic 2 (challenge and difficulty perception), and Topic 3 (character construction perception) are tightly clustered, exhibiting significant semantic overlap. Players actively discuss the combat mechanisms in the game, including character move combinations, skill design, and boss battle strategies, emphasizing the refinement of the combat system and the tactile feel of gameplay. Players process the information they receive in the game based on their previous gaming experiences and personal preferences—essentially engaging in the reception and perceptual processing of sensory information surrounding combat design, challenge, and character development. This serves as the perceptual foundation for processing cultural elements and interpreting meaning.

The semantic overlap indicates that when players evaluate the combat system, difficulty level, and character representation, they often use similar vocabulary, suggesting a cognitive linkage between the three. This densely populated area in semantic space reveals that combat, challenge, and character collectively form the core axis of players' experiential perception, and belong to the realm of deep participatory perception at the gameplay level.

3.1.2 From "Monkey" to "Wukong": The Character as a Bridge for Cultural Interpretation

Theme 4 revolves around cultural elements and is semantically distinct from the previously mentioned cluster of combat-related themes. Upon entering the game, players' initial impression of the main character as a generic "monkey" gradually transforms into the culturally specific symbol of "Wukong," imbued with narrative and personality traits. This cultural transition represents the player's process of accepting Chinese culture, particularly as manifested through character cognition and emotional projection.

The symbol "Wukong" carries rich pretextual connotations. Some players had been exposed to the character symbol prior to playing the game via various channels, and thus the role-playing experience evokes original memories that become embedded in the overall gameplay experience, prompting strong identification with the game. For example: "You play as Wukong, what more needs to be said?" Conversely, if a player lacks the necessary cultural background knowledge, they may struggle to understand the character's motivations and narrative details, which hampers immersion and negatively affects their perception of cultural elements in the game.

3.1.3 Constructive Attention to Technical Performance Driven by High Expectations

Upon release, the game received widespread acclaim in China, where praise from players, game media, and public opinion was overwhelmingly positive. This surge of favorable reviews was often accompanied by nationalist sentiment and collective identification, generating an atmosphere of grand celebration. This celebratory mood—disseminated via social media, professional reviews, and live streaming—also influenced foreign players and raised their psychological expectations:"…Still worth a grab, just don't get lost in the hype and see it for what it is."Unable to fully participate in this domestic wave of enthusiasm, foreign players paid heightened attention to the game's technical aspects.

The high-frequency keywords in Topic 5 show that international players are highly sensitive to technical performance. Frame rate, stability, and compatibility were frequent focal points in reviews. Many players offered concrete suggestions regarding game settings and hardware optimization. For example:"I am running a RTX 3060 with 32GB RAM… 60 fps with high and medium settings."

Such comments reflect a non-confrontational and constructive feedback tendency. In this context, technical parameters not only describe user experience but also function as a medium for communication and collaboration among players.

3.1.4 Emphasizing Immersion and Effort in Constructing Personal Gameplay Meaning

The alternate world constructed by the game also serves as a complex site for self-formation. Players' in-game decision-making and interaction patterns not only reflect their internal value systems but also constitute part of a dynamic self-concept construction process[7]. The high-difficulty setting typical of Souls-like games compels players to repeatedly confront challenges and endure trial-and-error cycles. This bittersweet dynamic—"…And the way it really makes you Rage after losing to a boss after 69+ Tries…"—demonstrates players' understanding and acceptance of the game's mechanics and fosters a sense of belonging within the gaming community.

Keywords in Topic 6, such as "grind," "life," and "brain," reflect the considerable energy players invest in the game and how they derive personal meaning from it. Comments often include phrases like "100% achievements" or "played for 3 hours," indicating that players view the game as a process of self-expression and value formation. This reflects a dynamic mechanism of identity construction, in which players extend aspects of their real-life identities into virtual practices.

3.2 Emotional Characteristics under Each Perception Theme

Using the GoEmotions model, each comment was labeled with multiple emotion tags. In total, 28 distinct emotions were identified. Based on the overall emotion distribution, the comments were aggregated by their LDA topic assignments to construct a topic-emotion matrix.
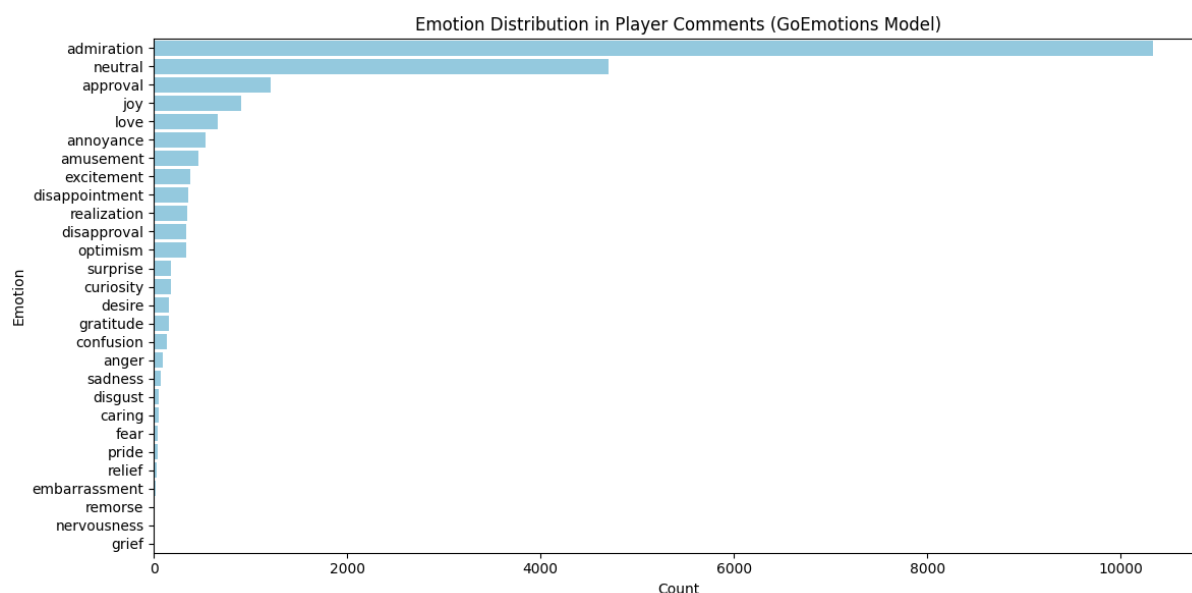

Figure 3. Overall Emotion Distribution in Player Reviews

3.2.1 Rational Appreciation Reflects Cultural Integration of Chinese Games in the Global Context

Overall, admiration emerged as the most dominant emotion across reviews, followed by neutral and approval (see Figure 3). This indicates that players generally held positive evaluations of Black Myth: Wukong, but their expressions tended to be rational rather than emotional. Many reviews assessed the game systematically, touching on aspects like storyline, visual effects, audio quality, and combat system—e.g., "Story Line Good. Voice Overs Good. Graphics/Audio Good..."—placing the game squarely within the evaluation framework of AAA Souls-like titles.

Players are no longer viewing the game from an outsider's perspective or simply appreciating its "exoticism." Instead, they evaluate the game through the lens of its genre-specific merits. This structured expression of appreciation is itself a sign of cultural acceptance and engagement. Such rational and systematic commentary reflects not only the game's integration into international discourses, but also signifies the growing discursive parity of Chinese games on the global stage.
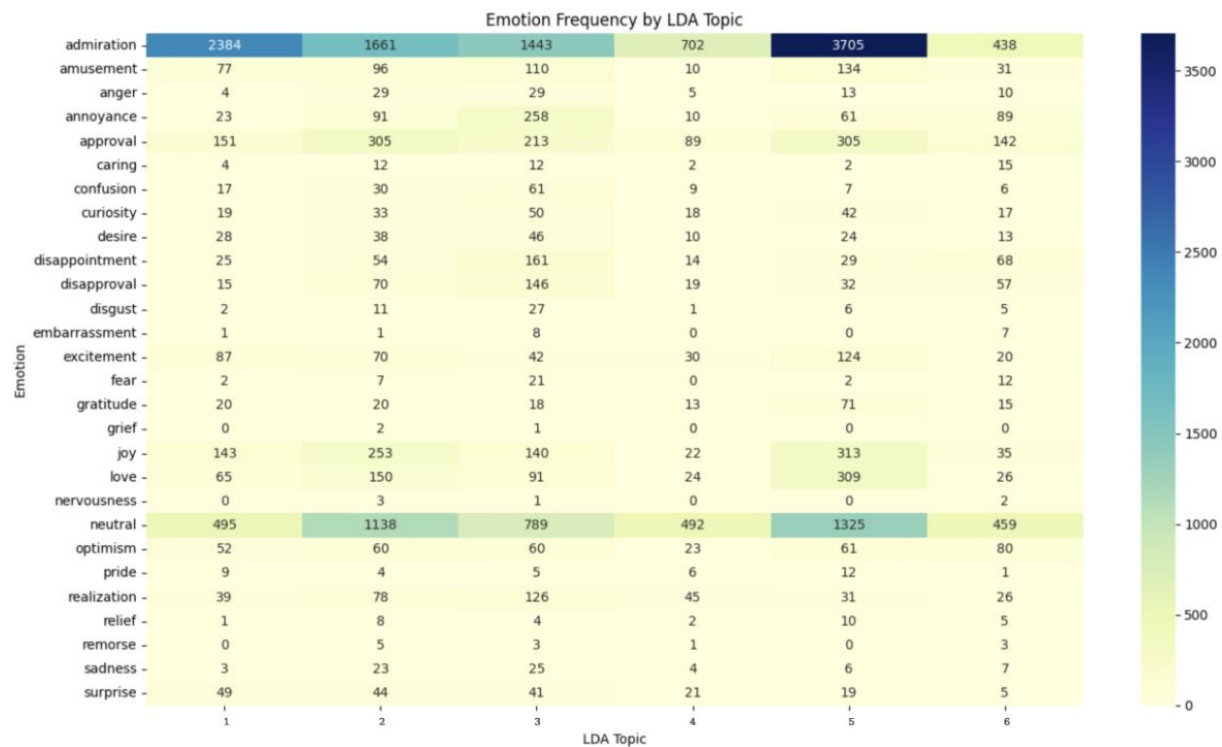
Emotion Frequency by LDA Topic

Emotion	1	2	3	4	5	6
admiration	2384	1661	1443	702	3705	438
amusement	77	96	110	10	134	31
anger	4	29	29	5	13	10
annoyance	23	91	258	10	61	89
approval	151	305	213	89	305	142
caring	4	12	12	2	2	15
confusion	17	30	61	9	7	6
curiosity	19	33	50	18	42	17
desire	28	38	46	10	24	13
disappointment	25	54	161	14	29	68
disapproval	15	70	146	19	32	57
disgust	2	11	27	1	6	5
embarrassment	1	1	8	0	0	7
excitement	87	70	42	30	124	20
fear	2	7	21	0	2	12
gratitude	20	20	18	13	71	15
grief	0	2	1	0	0	0
joy	143	253	140	22	313	35
love	65	150	91	24	309	26
nervousness	0	3	1	0	0	2
neutral	495	1138	789	492	1325	459
optimism	52	60	60	23	61	80
pride	9	4	5	6	12	1
realization	39	78	126	45	31	26
relief	1	8	4	2	10	5
remorse	0	5	3	1	0	3
sadness	3	23	25	4	6	7
surprise	49	44	41	21	19	5

LDA Topic

Figure 4. Heatmap of Emotion Distribution Across Perception Themes

3.2.2 Emotional Identification Rooted in the Experience of "Playability"

Themes 1 to 3 show significantly higher emotional engagement. Combined frequencies of admiration and approval exceed 6,000, and emotions like joy and love also appear frequently. For instance:"…the combat however is fundamentally flawed… but I guess I had too high expectations…"This indicates that gameplay is the most emotionally stimulating component for players. As producer Feng Ji once stated in an interview, "The most important thing about a game is whether it's fun to play." Players' approval is fundamentally grounded in their rational judgment formed through deep engagement.

This experience-driven evaluation model reflects a high-involvement, high-standard cognitive approach. Players often compare Black Myth: Wukong to other AAA Souls-like games in horizontal evaluations. This seemingly critical attitude actually implies recognition and appreciation. Stripped of the domestic players' "sentimentalism" and the foreign players' "novelty effect," the game is now evaluated primarily on the quality of its gameplay—signaling its formal entry into global competition.

3.2.4 Technical Performance Triggers Strong Resonance and Positively Skewed Emotions

Comments related to technical performance show highly concentrated positive emotions. As shown in the heatmap, admiration is most frequently associated with Theme 5, with 3,705 instances—the highest across all themes. In addition, joy (313 instances), love (309), and excitement (124) are also prevalent—reflecting an immersive and satisfying experience.

Such positive feedback often includes "constructive information sharing," as in:"...4090 and ran everything on max settings..."Players frequently share hardware configurations and gameplay experiences. These technical exchanges establish a shared, communicable user experience. Technology here not only enhances acceptance of the game, but also serves as a carrier of emotional connection and community bonding.

4. Conclusion

From gameplay mechanics to cultural expression, and from technical performance to emotional resonance, overseas players' evaluations of Black Myth: Wukong demonstrate a high level of engagement and cultural awareness. These findings reveal the complex pathways through which players receive and reconstruct meaning during the international dissemination of Chinese games. Overall, the communication effects of Chinese AAA games have transcended superficial entertainment and consumption, giving rise to a cross-cultural communication mechanism driven by immersive gameplay, aesthetic curiosity, and user co-creation.

4.1 Immersive Mechanism: Souls-like Challenge Induces Flow Experience

Player reviews consistently focus on combat systems and gameplay difficulty, with emotional expressions showing strong involvement, high praise, and sharp criticism. This emotional tension indicates that challenge design is a key source of immersion. According to Mihaly Csikszentmihalyi's theory of "flow," high-difficulty and low-tolerance tasks stimulate users to persistently iterate, adjust, and refine their behavior, resulting in deep absorption and intrinsic satisfaction [8]. Black Myth: Wukong continues the Souls-like tradition through boss battles, real-time feedback, and goal-matching systems, constructing a highly focused gameplay scenario. This leads players into a cognitive loop of "challenge–feedback–adjustment," enabling dual immersion on both operational and narrative levels.

This immersive mechanism not only enhances player stickiness but also motivates players to actively seek out storylines and cultural backgrounds, forming an extended pathway from mechanical immersion to cultural cognition[9]. Especially when confronting high-difficulty gameplay, players undergo repetitive trial-and-error, gaining experience and adjusting pace over time. In doing so, they develop a sense of self-efficacy [10]. This provides a valuable reference for constructing globally competitive immersive standards in Chinese games.

4.2 Cultural Dissemination: Coexistence of Admiration and Confusion Drives Cross-Cultural Learning

Within the LDA-derived themes, cultural perception is not the most dominant focus, but it generates stronger and more complex emotional reactions than other themes. Players frequently discuss cultural signifiers such as "Wukong" and "Journey to the West," expressing curiosity and admiration toward the Chinese mythological system. However, difficulties in understanding plot details and character motivations also emerged, highlighting typical experiences of cultural distance.

This reaction reveals the paradox of high-context cultures in international dissemination: cultural elements serve both as sources of attraction and as barriers to comprehension. Since Black Myth: Wukong is rooted in Journey to the West, its story contains many untranslated metaphors and symbolic constructs. For players lacking relevant cultural schemas, these elements form cognitive black boxes. Some players noted that "the plot is hard to understand" or "I can't empathize with the character's motivations"—responses that can be interpreted as cognitive resistance caused by frame mismatches in communication psychology.

However, analysis of specific comments shows that despite these cognitive obstacles, players are not rejecting cultural content. Instead, the game's audiovisual aesthetics inspire curiosity and a desire to explore. Elements such as "demonic character designs," "Oriental music," and "ancient architecture" create sensory attraction, evoking a form of aesthetic cosmopolitanism [11]. Players approach Chinese culture from a globalized perspective, and for many, this visual enjoyment translates into cross-cultural learning motivations—some even mentioned reading Journey to the West to better understand the game.

The cultural dissemination of Black Myth: Wukong does not follow a linear model. Initial shock and novelty arouse interest, encouraging players to overcome cultural barriers. However, subsequent interpretive challenges reintroduce a sense of cultural otherness. Due to the Souls-like structure of the game, players are required to engage in "iterative labor" [12], repeatedly going through cycles of "understanding–misunderstanding–reinterpretation." The game's cultural impact thus emerges from an interplay of emotional arousal and cognitive adaptation. Through the delivery of culturally distinct experiences, Chinese games construct a participatory arena for intercultural understanding and identification.

4.3 Co-Creation Mechanism: Players Actively Construct Cultural Identification

Built on intertwined processes of understanding and emotional response, players are no longer passive receivers of content; instead, they participate as co-creators in constructing the meaning of the game. Beyond the game environment, they engage in conversations through social media, livestream platforms, and comment sections, discussing plotlines, cultural symbols, and character interpretations. These interactions constitute a "co-construction–resonance–consensus" pathway in cultural dissemination.

This aligns with Henry Jenkins's notion of participatory culture, in which players break the designer's monopoly on interpretation through comments, fan art, and mod development. In this way, they continually generate new cultural meanings through collective discourse. Players become not merely individuals who "play," but cultural agents who embed themselves into the narrative and construct significance. From the moment the game is released, narrative authority begins to shift from developers to the community. Player engagement not only enriches the cultural context of the game but also enhances its longevity and global communicative efficacy.

Moreover, in cases of cultural misunderstanding or divergent interpretations, the collaborative negotiation of meaning among players helps lower interpretive barriers. Diverse perspectives from the player base contribute to

a pluralistic framework of cultural cognition, thereby facilitating the internalization and acceptance of foreign cultural elements. This shift transforms cultural dissemination from a unidirectional model of "telling stories" into a dialogic process of "co-performance," achieving deeper transitions from perception to identificationp[13].

As a representative of China's AAA game production, Black Myth: Wukong demonstrates a multi-layered mechanism of cultural perception among international players—one that evolves from immersive gameplay to co-created meaning. Through challenging gameplay, aesthetic engagement, and interactive user participation, the game not only succeeds in overseas entertainment markets but also offers a model for the digital dissemination of Chinese culture. By perceiving, interpreting, and regenerating meaning through play, players help position games as vital mediators in cross-cultural exchange. Future studies may further explore variations in player reception across cultural backgrounds, or delve into the negotiation of cultural identity, in order to advance the international communication of original Chinese digital content.

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