

Evolving Storyworlds of K-pop Idol IPs: Generational Shifts in Fan Engagement and the Embodiment of Desire

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Abstract This study explores the evolving storytelling strategies and consumption patterns of K-pop idol IP (intellectual property) through a comparative analysis of the first-generation idol group Shinhwa and the third-generation group EXO. By examining their official storyworlds—constructed through album lyrics and official concept materials—and fan-produced storyworlds such as fanfiction, the research highlights the dynamic interplay between official narratives and fan creativity. The necessity of this study lies in addressing the gap in understanding how K-pop fandom’s creative practices and digital media environments have shaped and been shaped by idol storytelling strategies across generations.

Methodologically, the study employs a mixed approach combining text mining, topic modeling, and cluster analysis to analyze official album content and approximately 1,350 fanfictions. Shinhwa’s narrative, lacking a unified official storyworld, emphasizes emotional and seasonal themes, fostering fan-driven interpretations and creative reimagination. In contrast, EXO’s meticulously crafted storyworld, grounded in a supernatural concept (EXO Planet), reflects a paradigm shift in K-pop storytelling, where immersive world-building serves as a key

engagement strategy.

The findings reveal distinct generational differences: Shinhwa fans primarily centered their narratives around the idols' physical attributes and relational dynamics, while EXO fanfictions incorporated official world-building elements, albeit selectively. The study further demonstrates that fanfiction, as a medium, not only supplements but also transforms the official storyworld, underlining the reciprocal and symbiotic relationship between official and fan-generated content. Additionally, the study examines the ethical implications of fan creations, particularly regarding idol privacy, image distortion, and the challenges of regulating digital fandom platforms.

This research contributes to the fields of K-pop studies, fandom culture, and digital humanities by offering critical insights into the collaborative and contentious spaces of K-pop storytelling. It underscores the importance of balancing creative freedom and ethical responsibility in a globalized digital fandom context, providing a foundation for further exploration of K-pop's cultural and industrial significance.

Keywords K-pop storytelling; fandom; storyworld; digital humanities; cultural studies

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1. Introduction

K-pop idols and fandom culture have emerged as pivotal areas of academic interest due to their significant economic value in the cultural content and intellectual property (IP) industries. Over the past two decades, K-pop content has evolved from a niche subculture into a global mainstream phenomenon, fostering extensive fandoms across diverse cultural regions. Particularly, K-pop idol IP has demonstrated substantial influence in domestic and international markets through innovative storytelling, the rise of digital media, and the activation of fandom-

driven economies.

The storyworlds constructed by K-pop idols go beyond their roles as musicians, integrating character development and narrative structures into immersive virtual universes. These storyworlds offer fans opportunities for creative participation and reinterpretation, effectively enhancing the value of idol IP. Notably, fanfiction has become a prominent medium for fan engagement, as fans generate new narratives based on official content, thereby strengthening emotional bonds between idols and their fandoms. Fiske (1990) underscored the role of audiences not as passive consumers but as active agents who reinterpret culture in unique and personal ways.

The K-pop industry has undergone significant generational shifts, with each generation exhibiting distinct characteristics in idol activities and fandom formation strategies. Table 1 outlines these generational differences, emphasizing the evolving storytelling approaches and fan engagement practices across the industry.

Table 1. Characteristics of K-pop Generations

Generation	Time Period	Leading K-pop Idols	Characteristics
1 st Generation	1996-2002	H.O.T(1996), Sechs Kies (1997), S.E.S (1997), Fin.K.L (1998), Shinhwa (1998), god (1999)	Early idol system, primarily domestic activities
2 nd Generation	2003-2011	TVXQ (2003), Super Junior (2005), Big Bang (2006), Girls’ Generation (2007), Wonder Girls (2007), KARA (2007), 2PM (2008), 2AM (2008)	Expansion of Hallyu (Korean Wave), entry into global markets
3 rd Generation	2012-2017	EXO (2012), BTS (2013), TWICE (2015), SEVENTEEN (2015), iKON (2015), BLACKPINK (2016), NCT (2016)	Digital content, social media presence, introduction of immersive storyworlds
4 th Generation	2018~ present	TXT (2019), ITZY (2019), aespa (2020), IVE (2021), STAYC (2020)	Hyper-personalized fandom experiences, integration of metaverse and AR/VR content

This study examines the evolution of storyworlds within the K-pop industry, focusing on two case studies: Shinhwa, a 1st-generation idol group, and EXO, a 3rd-generation idol group, both under SM Entertainment. The 3rd generation marks the formal adoption of storyworld strategies (Choi & Lim, 2019; Kim, 2023), with groups like EXO gaining recognition for fostering fan immersion and creative engagement through supernatural-themed storyworlds. In contrast, Shinhwa, as a 1st-generation idol group, exemplifies the early K-pop industry’s emphasis on fandom culture formation without the structured implementation of an official storyworld.

This research aims to elucidate how the interaction between official storyworlds and fan-created storyworlds contributes to the evolution of the content industry and fandom culture. To achieve this, the study conducts a comparative analysis of the official content of 1st- and 3rd-generation idols and investigates how fan-created narratives, such as fanfiction, contribute to the expansion of idol IP. Storyworld strategies in the K-pop industry have become a cornerstone for strengthening emotional bonds between idols and their fandoms, while simultaneously enhancing the value of intellectual property. By exploring this dynamic evolution, this study discusses the implications for the sustainability and global expansion of the K-pop content industry, ultimately contributing to the academic foundation of K-pop research.

2. Theoretical Frameworks

2.1 Fandom Studies

Fandom studies have predominantly developed within cultural and media studies, portraying fans as active participants who not only consume but also contribute to creative and community-driven activities. Jenkins (1992) introduced the concept of participatory culture, emphasizing how fans expand the boundaries of original texts to create new meanings. He later highlighted the role of digital technologies in advancing these practices through transmedia storytelling, where fans reconstruct narratives across diverse platforms. This demonstrates how fans engage deeply with specific narratives, creatively reinterpret them, and share their outputs through various media.

Booth (2010) explored fandom identity, self-expression, and the globalized nature of fan activities driven by social media. He argued that digital-age fandoms are defined by their boundary-crossing activities, supported by internal networks and shared creations. Hills (2002) further emphasized the emotional bonds within fandoms, which foster community cohesion and inspire creativity. Through deep emotional engagement with content, fans develop a sense of belonging, transforming fandoms into vibrant spaces for producing and consuming unique cultural expressions.

This framework highlights the need to understand fandom as an interactive and emotionally driven phenomenon. By analyzing how fans reshape and expand official narratives, this study aims to reveal the reciprocal relationship between producers and audiences in modern cultural industries.

2.2 K-pop Fandom Studies

K-pop fandom has emerged as a pivotal case within fandom research, thriving

in the context of digital technologies and globalized fan culture. Jung and Shim (2014) highlighted how K-pop fandom has evolved through globalization and digitalization, asserting that fans' creative production activities generate new cultural value through interaction with idol intellectual property (IP).

EXO, a prominent example of third-generation idols, utilized a supernatural storyworld to engage fans and inspire creative participation. Fans expanded this storyworld through fanfiction and fan art, crafting new narratives that supplemented or reinterpreted the official worldbuilding. In contrast, Shinhwa, a first-generation idol group, lacked an official storyworld but demonstrated how fandom could construct unique narratives and foster identity and community by focusing on the group's activities and members' individual traits. These cases illustrate how K-pop fandom interacts with idol IP to produce creative works and establish emotional bonds, showcasing the diverse ways in which fan engagement contributes to the evolution of idol storytelling strategies and fan-driven cultural production.

2.3 Storyworld and Character Consumption

The theoretical frameworks of transmedia storytelling and narrative consumption provide a lens to understand the interplay between idol IP storyworlds and character consumption. Jenkins (2006) defined transmedia storytelling as "a narrative strategy that unfolds across multiple platforms, encouraging active consumer engagement." K-pop idols build their storyworlds through albums, music videos, live performances, and social media content, which fans consume as an integrated experience. Notable examples include EXO's supernatural storyworld and BTS's universe, both of which epitomize transmedia storytelling strategies.

Narrative consumption, as described by Bruner (1990), involves audiences not passively accepting narratives but reconstructing them within their own experiences and contexts. EXO's fandom extends the official storyworld by generating new interpretations of characters and stories, while Shinhwa's fandom focuses on the group's activities to create unique narratives and humor. These practices demonstrate how K-pop fandoms consume and reimagine idol narratives, expanding both the storyworlds and the ways in which characters are perceived and consumed.

2.4 Research Objectives

Research on K-pop fandom has largely focused on global fandom and creative activities. However, systematic studies comparing idol groups across generations or exploring the interaction between official storyworlds and fan-created content, such as fanfiction, remain limited. This study addresses these gaps by examining the interplay between fan creativity and the evolution of storyworlds, with a focus on their impact on idol IP and the cultural content industry. The study explores the

following research questions (RQ):

RQ1: How do the official storyworlds of EXO and Shinhwa interact with fanproduced creations, and how have these interactions evolved?

RQ2: What role does emotional interaction within fandom play in the consumption and reconstruction of storyworlds and characters?

RQ3: How are K-pop idols' storytelling strategies integrated with digital fandom creativity, and what ethical considerations emerge?

Drawing on Fiske's (1992) model of textual production and Jenkins' (2006) concept of transmedia storytelling, this research analyzes Shinhwa and EXO's official storyworlds through album lyrics and concept materials, alongside approximately 900 fanfiction texts. The findings highlight generational differences: Shinhwa's fandom focused on member-driven narratives in the absence of a unified storyworld, whereas EXO's meticulously crafted supernatural storyworld ("EXO Planet") fostered immersive engagement and creative expansion.

This study underscores the reciprocal relationship between official and fan-generated content while addressing ethical challenges such as image distortion, privacy concerns, and the dissemination of explicit material. By offering insights into the collaborative evolution of storytelling in the K-pop industry, this research contributes to fandom studies, digital humanities, and the development of sustainable storytelling strategies.

3. Scope and Methods of Analysis

This study systematically investigates the interplay between the official storyworlds and fan-created narratives of K-pop idol groups Shinhwa (first generation) and EXO (third generation). The scope of the research encompasses song lyrics from their official discographies (comprising both studio and non-regular albums) and a curated dataset of fanfiction. Methodologically, the study adopts a mixed approach, incorporating morphological analysis, topic modeling, and textual analysis to explore the dynamics and intersections between these official and fan-generated narratives.

3.1 Analysis of Shinhwa's Official Storyworld and Fanfiction

To analyze the narrative structure and consumption patterns within Shinhwa's fanfiction, approximately 450 fanfictions were collected from major fandom platforms and preprocessed. The analysis procedure follows the sequence illustrated in the flowchart below:

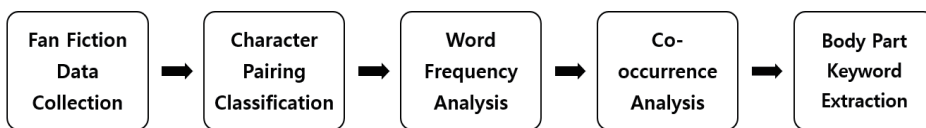


Figure 1. Shinhwa Fanfiction Analysis Workflow

The dataset was categorized based on coupling (relationships between members) to investigate how relational narratives are constructed and reinterpreted. Key terms were extracted and their frequencies analyzed, with the results visualized through bar graphs and word clouds for intuitive interpretation.

Additionally, co-occurrence word analysis was employed to identify associations between key terms. T-scores were calculated based on co-occurrence frequency, enabling the identification of recurring vocabulary and its contextual significance within the fanfiction. Finally, keywords related to specific members' physical features were filtered to analyze how physical imagery is consumed within narratives. This allowed for a detailed examination of how members' physical characteristics are utilized in fanfiction narratives, shedding light on their role in shaping fandom-created stories.

3.2 Analysis of EXO's Official Storyworld and Fanfiction

To analyze the interaction between EXO's official storyworld and fan-produced content, approximately 900 fanfiction texts were collected, refined, and systematically analyzed. As a representative example of a K-pop group with a meticulously crafted supernatural storyworld, EXO's fanfiction illustrates how fans adopt and expand on the official narrative framework.

The fanfiction data were gathered from major platforms and preprocessed through stopword removal and morphological analysis to ensure data quality. Key terms were extracted via text clustering, and cluster-specific unique keywords were identified. To manage the large and complex dataset, UMAP (Uniform Manifold Approximation and Projection) was employed to reduce high-dimensional data into a visualizable low-dimensional space, facilitating the identification of relationships between data points.

Subsequently, K-Means and DBSCAN clustering algorithms were applied to analyze narrative characteristics and structural trends. K-Means effectively categorized clusters and identified the centrality of keywords, while DBSCAN provided insights into density-based relationships and outliers within the data, highlighting nuanced patterns among minor data points.

Finally, the extracted keywords from fanfiction were compared with EXO's

official storyworld elements, such as album lyrics and concept materials, to analyze how fan-created content adopts and extends these official narratives. This comparative analysis examined how fan creations incorporate and expand upon elements of the official worldbuilding, revealing the processes through which fan-produced content interacts with and extends the official narrative. Through this approach, the study provides an in-depth understanding of the dynamic relationship between EXO's official storyworld and its fan-created derivatives.

4. K-pop Idol Official Storyworld Comparison: Shinhwa vs. EXO

The storyworlds of K-pop idols play a pivotal role in fostering fan engagement and creative participation, contributing significantly to the global success of idol intellectual properties (IP). This section compares the official storyworlds of Shinhwa, a first-generation idol group, and EXO, a third-generation group, to examine how storytelling strategies in K-pop have evolved across generations. Shinhwa focused on building emotional connections with fans through universal themes, while EXO constructed an immersive supernatural storyworld. These differences reflect the strategic evolution of the K-pop industry from its formative years to the era of digital content expansion.

4.1 Shinhwa's Official Storyworld Analysis

Shinhwa, lacking a unified narrative framework, relied on emotional storytelling to strengthen its connection with fans. The group's official content, including regular and special albums, demonstrated a thematic focus on emotional resonance, allowing fans to engage through imaginative interpretations and co-creative practices.

4.1.1 Analysis of Shinhwa's Studio Albums

An analysis of Shinhwa's 13 studio albums revealed a thematic emphasis on personal relationships and emotional experiences. Key terms such as "I," "you," and "love" frequently appeared in the lyrics, highlighting themes of love, separation, and reconciliation. This thematic consistency allowed fans to position Shinhwa as the protagonists of their narratives, fostering a deep sense of emotional immersion.

When stop words such as pronouns were filtered out, the thematic focus of each song became more pronounced, revealing the underlying narrative intent. Shinhwa's approach, which avoided complex world-building, provided fans with a flexible framework for creating their own stories while maintaining strong emotional connections. This strategy exemplifies how first-generation K-pop idols prioritized emotional resonance over intricate storytelling frameworks.

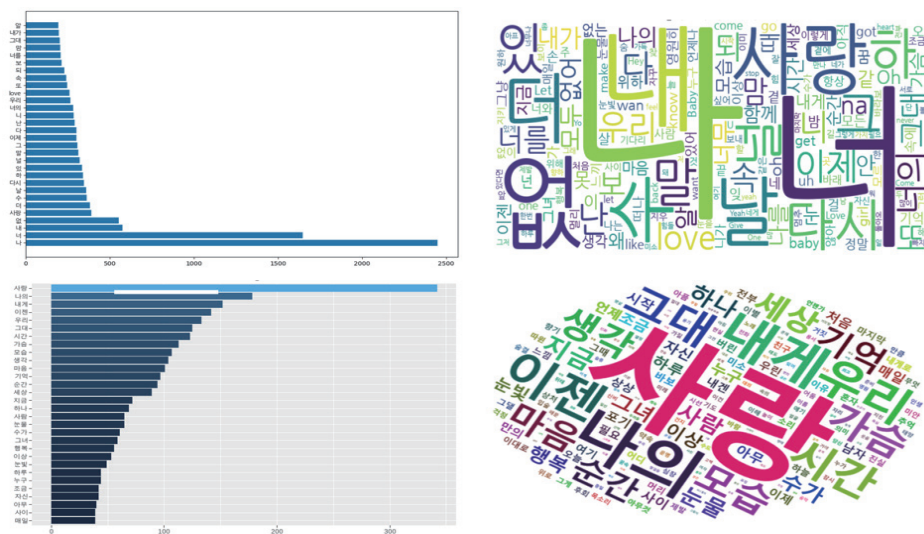


Figure 2. Shinhwa's Studio Albums (Top: Without Stopword Removal, Bottom: With Stopword Removal)

Figure 2 illustrates the frequency analysis results before and after stop word removal. The upper graph highlights the dominance of personal pronouns (e.g., “I,” “you,” and “dear”), reflecting the emotional tone of the lyrics. In contrast, the lower graph, with stop words removed, clearly emphasizes core narrative themes such as love, separation, and longing. This demonstrates the utility of stop word removal in isolating and analyzing key narrative elements.

4.1.2. Analysis of Shinhwa's Supplementary Albums

Shinhwa's supplementary albums, including seasonal releases and digital singles, adopted themes tailored to specific periods or occasions. For instance, the “Winter Story” album (2003) centered on winter imagery, with keywords such as “snow” and “farewell” dominating the lyrics. This seasonal focus provided an additional layer of emotional engagement, aligning with fans' sentimental experiences during particular times of the year.

The complementary nature of regular and special albums highlights how Shinhwa established a robust emotional connection with its audience. By enabling fans to explore emotional narratives without the constraints of a defined storyworld, Shinhwa effectively laid the groundwork for imaginative fan-driven storytelling.

Figure 3 compares the keyword frequency analysis of Shinhwa's miscellaneous albums before and after stopword removal. The upper graph highlights the frequent use of pronouns such as “I,” “you,” and “dear,” which emphasize the emotional tone of the lyrics. In contrast, the lower graph reveals thematic keywords such as

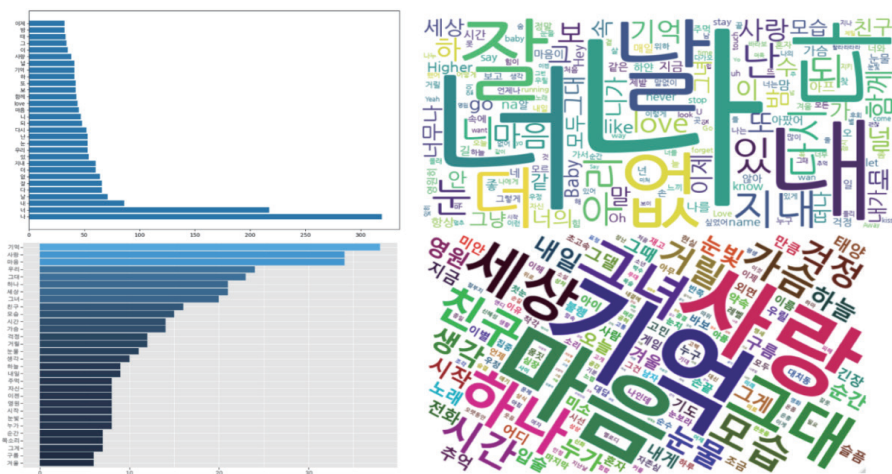


Figure 3. Shinhwa's Supplementary Albums (Top: Without Stopword Removal, Bottom: With Stopword Removal)

“separation,” “longing,” and “memory” after stopword removal, illustrating how this process isolates core thematic elements and enhances interpretative clarity.

Shinhwa's miscellaneous albums, distinct from their regular releases, provided episodic narratives tied to seasonal or thematic contexts, complementing the sustained emotional engagement of their main discography. Regular albums established continuity in emotional storytelling, while miscellaneous albums offered diverse, context-specific experiences. The absence of a unified storyworld framework meant that emotional narratives were largely shaped by individual albums and fan interpretations. This flexibility allowed fans significant creative freedom to personalize their connection with the group. Shinhwa's approach reflects the adaptability of first-generation K-pop idols in fostering fandom engagement, despite structural limitations in IP storytelling strategies—a precursor to the more integrated and narrative-driven approaches of later K-pop generations.

4.2 Analysis of EXO's Official Storyworld

EXO, a third-generation K-pop idol group that debuted in 2012, represents a pioneering example of constructing a distinctive official storyworld based on a supernatural concept, “EXO PLANET.” This storyworld was incorporated into their albums and music videos from the group's debut, engaging fans through immersive narratives and marking a turning point in the adoption of storyworld strategies within the K-pop industry. This section analyzes the composition of EXO's storyworld through their album lyrics and compares it with Shinhwa's approach to explore generational differences in K-pop idol IP strategies.

All album lyrics released during EXO's career were collected and categorized

into regular and miscellaneous albums for analysis. Regular albums included the seven main studio albums, two mini-albums, and repackage albums with additional tracks, as these shared narrative coherence. Miscellaneous albums comprised digital singles, winter specials, and live albums, categorized separately due to their independent thematic focus.

The analysis followed a two-step process. First, frequent words and thematic features were identified by extracting nouns, pronouns, adverbs, verbs, and adjectives through frequency analysis. Second, the data were reanalyzed after removing stopwords, such as pronouns and single nouns, to extract more precise semantic trends. This systematic approach aimed to identify the narrative characteristics and structural composition of EXO's storyworld.

The findings were visualized using bar graphs and word clouds to highlight the narrative differences between regular and miscellaneous albums, revealing the distinctive features of EXO's storyworld. This analysis also provides a basis for comparing EXO's and Shinhwa's storyworld strategies, offering insights into the evolution of idol IP strategies across K-pop generations.

4.2.1. Analysis of EXO's Studio Albums

The analysis of EXO's regular album lyrics revealed several distinctive features compared to Shinhwa. Unlike Shinhwa, where personal pronouns such as "I," "you," and "dear" were prominent, EXO's lyrics showed a relatively lower frequency of personal pronouns, highlighting a differentiated narrative approach.



Figure 4. EXO's Studio Albums (Top: Without Stopword Removal, Bottom: With Stopword Removal)

Even after removing stopwords, the keyword “love” remained highly frequent, indicating that the theme of love continues to be central to the narratives of third-generation idols. Additionally, keywords such as “love,” “memory,” “time,” “heart,” and “mind” ranked high in frequency, demonstrating a thematic continuity between first- and third-generation idols in emphasizing emotional and relational storytelling.

However, EXO’s albums showcased a unique feature with each album presenting a distinct concept and theme, setting them apart from first-generation idols. For instance, keywords such as “world,” “light,” “moon,” “darkness,” and “star” were among the top 30 nouns, reflecting the incorporation of EXO’s official storyworld, “EXO PLANET,” into their lyrics. This suggests that EXO’s albums not only explore the theme of love but also establish a complex and interconnected storyworld, enhancing narrative depth and engagement through cohesive and imaginative storytelling. This narrative strategy highlights the evolution of K-pop storytelling, where immersive world-building serves as a key engagement tool, differentiating third-generation idols from their predecessors.

4.2.2. Analysis of EXO’s Miscellaneous Albums

The analysis of EXO’s miscellaneous albums revealed a significant emphasis on winter-themed content, with winter special albums comprising the largest proportion. Keywords such as “snow,” “winter,” “merry,” “Christmas,” and “warmth” frequently appeared, reflecting a strong seasonal focus. This trend became even more pronounced after stopword removal, with additional thematic keywords like “tears” and “memories” highlighting narratives centered on love and separation.

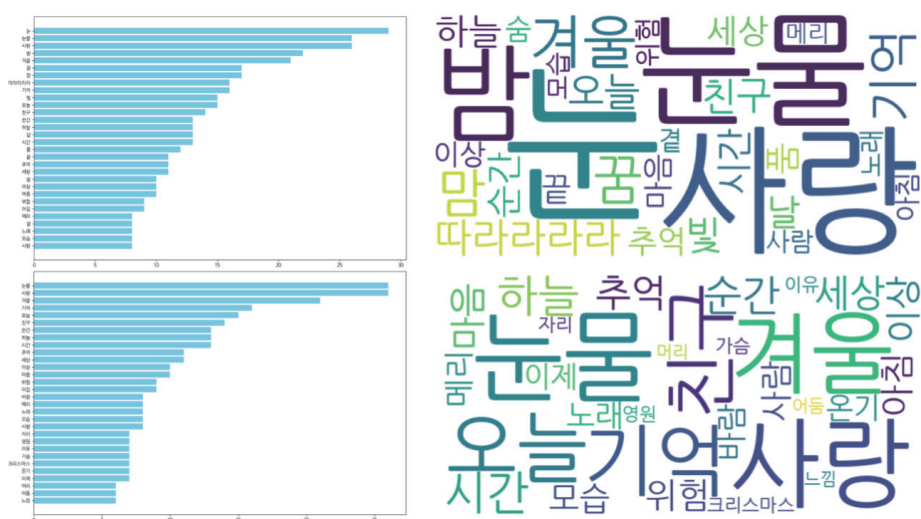


Figure 5. EXO Miscellaneous Albums (Top: Without Stopword Removal, Bottom: With Stopword Removal)

These findings parallel the patterns observed in Shinhwa's miscellaneous albums, suggesting that EXO's special albums similarly prioritize season-specific concepts and mass appeal. Furthermore, the results indicate that EXO's special albums may convey independent narratives that are not directly linked to the overarching "EXO PLANET" storyworld. This detachment underscores a commonality with Shinhwa's miscellaneous albums, which also relied on episodic and context-specific themes rather than a unified storyworld.

4.3 Comparison of Shinhwa and EXO's Official Storyworlds

Both Shinhwa and EXO centered their narratives on the universal theme of "love," but their approaches to album storytelling and storyworld construction exhibited significant generational differences. Shinhwa reinforced emotional connections with fans through expressive narratives, lacking a clear overarching storyworld or concept. This simplicity allowed fans to exercise imaginative freedom in interpreting and extending the group's identity. In contrast, EXO retained "love" as a core theme while building a cohesive and elaborate storyworld, **EXO PLANET**, which established connections across albums and fostered a multifaceted and immersive narrative experience.

Regarding miscellaneous albums, both groups emphasized seasonal concepts, such as Christmas and winter, reflecting similar strategies that incorporated seasonality and mass appeal. These albums were purpose-driven, designed to align with specific occasions. However, EXO distinguished itself by assigning unique concepts and storyworld elements to each album, thus creating a distinctive identity that set it apart from first-generation idols like Shinhwa.

In conclusion, Shinhwa offered a straightforward and universal approach, leveraging emotional narratives to provide fans with a foundation for creative engagement. EXO, on the other hand, combined a supernatural storyworld with digital content to maximize fan immersion and participation. This strategy facilitated the expansion of their global fanbase and stimulated creative practices in the digital age. The storyworlds of both groups reflect the contextual and strategic evolution of K-pop idol IPs, serving as key examples of how storytelling practices have advanced across generations in the K-pop industry.

5. Fanfiction Consumption of Idol Storyworlds: A Comparison of Shinhwa and EXO

Fanfiction serves as a primary medium through which fandoms consume, reinterpret, and expand upon idols' official storyworlds. This chapter analyzes Shinhwa's fanfiction consumption patterns to explore how the absence of an official storyworld influenced fan creativity. It also identifies distinctive features of fan-

driven storytelling and emotional interactions within the fandom.

5.1 Analysis of Shinhwa's Fanfiction Consumption

As a first-generation K-pop idol group without an official storyworld, Shinhwa provides a unique case where fans independently created narratives, consuming and expanding the members' images. Lee (2003) highlights how Shinhwa fanfiction functioned as a tool for self-exploration and creativity among teenage female fans, illustrating that fanfiction transcended mere consumption to become a platform for identity formation. Building on this foundation, this study examines the consumption patterns of Shinhwa fanfiction and the role of fanfiction in fostering emotional interactions.

Focus on Physical Image Consumption

One prominent feature of Shinhwa fanfiction is the frequent use of physical imagery. Fans constructed narratives centered on romantic or sexual relationships between members, with keywords such as “hands,” “lips,” and “thighs” serving as pivotal narrative elements. This highlights how, even in the absence of an official storyworld, fans utilized physical imagery to create stories, reflecting their capacity to reconstruct relational dynamics through member-specific characteristics.

Differentiation of Roles and Images Among Members

Fanfiction also revealed distinct roles and consumption patterns for individual members. For instance, Eric (Jeonghyuk) was predominantly portrayed in the “Top” role, with his strong leadership image and symbolic significance within the fandom emphasized. This suggests that fans actively assigned differentiated roles and images to members, autonomously constructing a storyworld that reflected both official representations and fan-driven interpretations. Shinhwa's case underscores the adaptive and creative practices of first-generation K-pop fandoms, demonstrating how fans compensated for the lack of an official storyworld by crafting emotionally resonant and relationship-driven narratives.

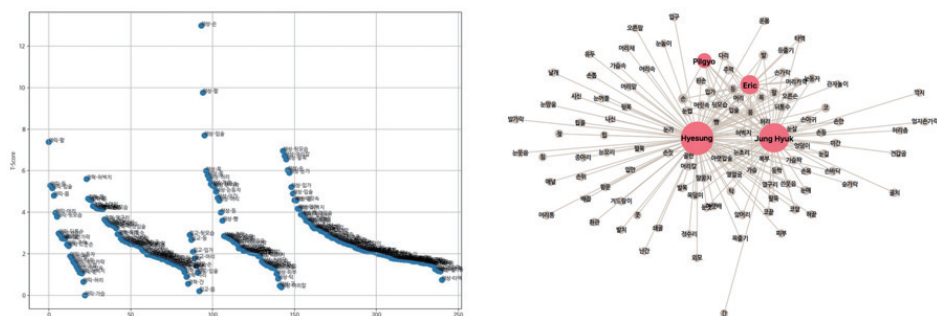


Figure 6. Body Part Associations in Shinhwa Fanfiction

Figure 6 illustrates the physical keywords and narrative roles associated with Eric (Jeonghyuk) and Hyesung (Pilgyo) in fanfiction. Eric is linked to keywords such as “hands” and “thighs,” emphasizing an authoritative and protective image, while Hyesung is primarily associated with “hands,” highlighting an emotional and delicate persona. Notably, Hyesung alternated between “Top” and “Bottom” roles, reflecting the fandom’s nuanced interpretation of his character. This analysis indicates that the fandom actively differentiated member images and roles, using them as a basis to expand the narrative dimensions of the storyworld.

Name Usage in Shinhwa Fanfiction

Shinhwa fanfiction exhibited distinctive patterns in the use of member names. Hyesung was predominantly referred to by his stage name, reflecting his public persona and symbolic role within the fandom. In contrast, Eric (Jung-hyuk) was frequently mentioned by his real name, emphasizing his personal identity and leadership qualities. This pattern suggests that the fandom assigned different symbolic meanings to stage names and real names, integrating them into their narratives in nuanced ways.

The consumption patterns in Shinhwa fanfiction demonstrate how fans, in the absence of an official storyworld, constructed unique narratives by leveraging members’ physical images, roles, and name usage. These fan-created narratives not only reinforced emotional interactions within the fandom but also expanded the storyworld in creative ways. However, the lack of a unified storyworld often led to fanfiction that focused heavily on physical imagery, resulting in a storytelling approach that was both imaginative and limited in scope.

5.2 EXO Fanfiction Consumption Analysis

5.2.1 Cluster Analysis

This study analyzed approximately 900 EXO fanfiction texts to investigate how fan-created content interacts with and reconstructs the official storyworld. Through a multi-step process encompassing text preprocessing, clustering, and TF-IDF-based keyword analysis, the findings reveal that EXO fanfiction serves as a platform for creatively reinterpreting the group’s supernatural storyworld while forming diverse narrative and emotional patterns.

The analysis identified five distinct clusters, each representing unique narrative focal points and keyword associations:

Cluster 1: Dominated by keywords such as “self,” “thought,” and “face,” this cluster emphasizes personal introspection and psychological conflict, often exploring the emotional journeys of characters.

Cluster 2: Keywords like “genitals,” “man,” and “fingers” define this cluster,

Table 2. Cluster Keyword Analysis of EXO Fanfiction: Top 20 and Unique TF-IDF Keywords

Cluster	Top 20 Keywords	Unique Keywords (TF-IDF)
1	talk, bell, surface, hand, eye, thinking, face, self, brother, person, moment, mouth, sound, head, paper, body, work, house	person, thinking, face, paper, sound, personality, head, look, man, expression
2	man, talk, hand, genitals, face, eyes, mouth, face, body, bell, inside, thinking, head, brother, sound, back, when, finger, himself, waist, backs, backside	man, penis, face, sound, finger, paper, thinking, hole, ass, himself
3	face, word, hand, body, eye, thought, face, mouth, species, person, omega, sound, alpha, moment, brother, day, mom, mind, inside, scent	omega, thinking, face, alpha, sound, self, man, head, person, lips
4	uncle, talk, himself, hand, face, eyes, moment, person, thinking, body, face, sound, brother, mouth, work, house, bell, back, child, head	uncle, himself, face, paper, thought, sound, puppy, person, kid, head
5	talk, Seok, Min, boss, hand, brother, thought, person, person's, when, self, face, day, eye, mouth, house, sound, species, mind, voice, voice, look, face	boss, thinking, letter, himself, person, face, shop, sound, heart, man

which centers on relational and sensory narratives, reconstructing themes of sexuality and emotional interaction.

Cluster 3: Featuring keywords such as “omega” and “alpha,” this cluster highlights fan reinterpretations of EXO’s official supernatural storyworld, creatively incorporating its themes into expanded narratives.

These findings underscore the role of fanfiction as a medium for creative expansion of EXO’s official storyworld. Fans not only consume but also act as co-creators and reinterpreters, enriching the narrative complexity of K-pop content and demonstrating the dynamic interplay between official and fan-generated storytelling.

5.2.2 Similarity Analysis through Visualization

Using UMAP (Uniform Manifold Approximation and Projection), the text similarity between fanfictions was visualized, and clustering was performed using K-Means and DBSCAN algorithms. UMAP reduced the high-dimensional text data into a lower-dimensional space, allowing for a clearer visual understanding of the relationships between the texts. K-Means proved effective in grouping fanfiction texts based on their distribution, categorizing the narratives by their thematic patterns and similarities. Each cluster was classified according to specific keywords and narrative characteristics, providing insights into the major narrative patterns within the fanfiction corpus. DBSCAN, a density-based clustering method, allowed for a more flexible understanding of the relationships within and between clusters. This approach helped explore the structural tendencies of the data and the

connections between smaller data points, offering deeper insights into less dominant but significant patterns.

This analysis contributes to understanding how the narrative features of fanfiction are connected to and creatively expand upon the official storyworld, providing a clearer picture of how fan-generated content interacts with the official narratives.

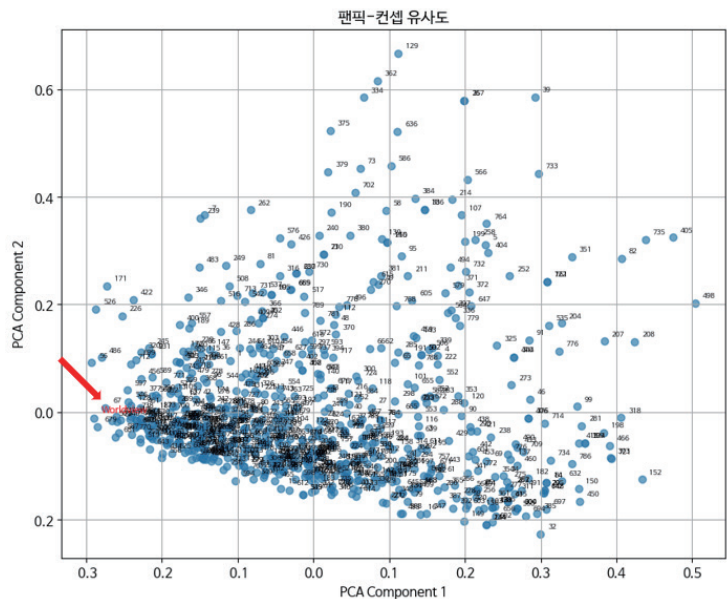


Figure 7. PCA Analysis of EXO's Official Concept and Fanfiction Similarity

Figure 7 illustrates the results of the PCA (Principal Component Analysis) used to visualize the similarity between EXO's official storyworld and fanfiction. PCA is employed to reduce the dimensionality of the data, facilitating a clearer understanding of the similarities and differences. Each point represents a fanfiction, with proximity between points indicating a higher degree of narrative similarity. The "Worldview" label refers to EXO's official concept, which serves as the reference point for analyzing the distribution of fanfictions.

The analysis reveals that while most fanfictions align with the official storyworld, some fanfictions present original and modified narratives. This demonstrates how EXO fanfiction not only reflects but also expands the official storyworld. This visualization highlights the manner in which fanfictions evolve, moving beyond mere narrative listing and developing in connection with the official storyworld. Im (2015) emphasized that the creative activities within the

EXO fandom deepen internal relationships and creative processes, while also strengthening social cohesion. EXO fanfiction thus offers significant insights into the interaction between K-pop fandoms and official storyworlds.

5.2.3 Interaction between Official Storyworld and Narrative Consumption Patterns

EXO fanfiction creatively integrates elements of the official storyworld, reflecting the fandom's distinctive narrative consumption patterns. This section analyzes the incorporation of the official storyworld, the consumption of bodily imagery, and the originality of titles and narratives within fanfiction.

Reflection of the Official Storyworld

EXO fanfiction incorporates elements from the official storyworld, as well as album-specific concepts (such as space, wolves, superpowers, and school themes), into the fanfiction titles and narratives. For instance, tracks from the *XOXO* album, such as “Butterfly Girl” and “Peter Pan,” were reimagined into “Butterfly Boy” and “Growing Peter Pan,” while the school concept was materialized through titles such as “High School Boy” and “High School.” This highlights how the official storyworld plays a pivotal role in fanfiction creation.

Consumption of Bodily Imagery

Bodily imagery, including terms like “hand,” “eyes,” and “lips,” frequently appear as central elements in the narratives, deepening sensory and emotional interactions. This demonstrates how fans use physical imagery to further define and elaborate on the narrative, enhancing the emotional depth of the storylines.

Originality in Titles and Narratives

Additionally, elements such as “superpowers” serve more as secondary functions that enhance the individuality and symbolism of the characters, rather than as primary narrative drivers. This reflects how fans creatively reinterpret the official world and project their own experiences and desires into the narratives, highlighting the dynamic interplay between fan creativity and official storyworlds.

Fiske's (1992) model of textual production views fans as active creators who reconstruct and expand content, rather than passively consuming it. Shinhwa's fandom exemplifies this by crafting original narratives centered on the images and relational dynamics of individual members, despite the absence of an official storyworld. This approach fostered emotional interactions within the fandom and encouraged self-exploration through emotive storytelling.

In contrast, Jenkins' (2006) concept of transmedia storytelling is clearly embodied in EXO's approach. By embedding their supernatural storyworld, EXO PLANET, across albums, music videos, and social media platforms, EXO

successfully engaged fans through immersive and interconnected narratives. In this context, fanfiction served as a creative outlet, enabling fans to extend and further develop the official storyworld.

Taken together, the cases of Shinhwa and EXO demonstrate the evolution of fandom-driven textual production and the increasing importance of official storyworlds within generational K-pop IP strategies. Shinhwa's model aligns with Fiske's emphasis on fan autonomy, while EXO represents a contemporary application of Jenkins' transmedia storytelling, showcasing a progressive shift in how K-pop idols and fandoms interact through narrative practices.

5.3 Ethical Considerations of Fan Creation and Storytelling Strategies in the Digital Age

In the digital age, fan creation has evolved into a creative and participatory form of engagement, with fanfiction becoming a significant cultural pillar for reconstructing relationships between idols and developing narratives centered around their physical images. However, these creative activities raise several ethical concerns, which need to be addressed. This section discusses the ethical issues that may arise from fan creation and storytelling strategies within fandoms.

Fanfiction is often created based on idol members' names, appearances, and personalities, but these depictions can diverge from or distort the members' desired images. For instance, when a member is repeatedly portrayed in roles such as "Top" or "Bottom," or when their physical attributes are exaggerated, this can negatively affect both the member's personal identity and public image. Such portrayals may infringe on the idols' privacy and publicity rights, raising the need for image management and the establishment of ethical guidelines for fan creation. Moreover, fanfiction often establishes a dominant narrative or coupling within the fandom, which may marginalize other perspectives, leading to exclusion within the fan community. This undermines the democratic accessibility of creative practices within fandoms, where diverse interpretations and fan-created content should ideally coexist.

The portrayal of romantic or sexual relationships in fanfiction, while a form of creative freedom, becomes ethically problematic when exposed to minors. In particular, if sexual content excessively focuses on physical descriptions or distorts the members' actual images, it necessitates a discussion on the ethical boundaries of fan-created works. Lastly, fanfiction is predominantly shared on digital platforms like AO3 and Wattpad, which bear the responsibility of regulating the ethical standards of the content hosted on them. However, most platforms currently adopt a passive approach to regulating user-generated content, which can lead

to the neglect of ethical controversies. Therefore, it is crucial to redefine the role and responsibilities of these platforms in establishing and enforcing clear ethical guidelines for fan creation.

6. Conclusion

This study analyzes the interaction and evolution of the official storyworlds and fan-created storyworlds (fanfiction) of first-generation K-pop idol group Shinhwa and third-generation group EXO. Through this analysis, the study explores the shifts in K-pop idol storytelling strategies and the consumption patterns of fan creations.

The analysis revealed that the official storyworlds of Shinhwa and EXO were distinct across generations. Shinhwa, lacking an explicit storyworld, strengthened its emotional bond with the fandom through emotional narratives and seasonal keywords. In contrast, EXO, with its clear conceptual framework like the supernatural EXO PLANET, facilitated fan engagement and creative production. Fanfiction, while borrowing elements from the official storyworlds, reflected the desires and imaginations of the fandom, expanding the narratives in original ways. According to Fiske's (1992) model of textual production, fanfiction demonstrates how fans actively reconstruct content, a characteristic evident in Shinhwa's fanfiction. Meanwhile, EXO serves as a case applying Jenkins' (2006) concept of transmedia storytelling, where the expansion of the official storyworld occurs through its interaction with fan-created content.

Fanfiction played a significant role in creatively reconfiguring official content and expanding the narrative layers of idol IP. It primarily focused on the consumption of physical imagery and romantic or sexual relationships between members, differentiating it from the official storyworld. Although EXO fanfiction reflected elements of the official universe and album concepts, the reflection was limited. This indicates that fanfiction reinterprets the elements of the official world while reconstructing them based on the fandom's desires.

Emotional interactions within the fandom acted as a driving force in the consumption of the storyworlds and characters. EXO fanfiction, while incorporating the supernatural elements of the official world and album concepts, centered on the relationships between members and the consumption of their physical imagery. EXO's storytelling strategy blurred the boundaries between official content and fan creations, combining them with the creativity of the digital-age fandom. However, the consumption of physical imagery and the sexuality-centered narratives in fanfiction raise concerns about the distortion of idol images and privacy violations. This underscores the need for guidelines to foster responsible creative activity

within fan communities and the management of digital platforms.

In conclusion, this study confirms that K-pop fandom creation activities are breaking down the boundaries between creation and consumption in the content industry, contributing to the expansion of idol IP value. The K-pop fandom culture provides significant insights into the evolution of global fandom creativity and digital-era content consumption, highlighting the need for a deeper exploration of the interaction between fan creations and official storyworlds.

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