

Multisensory Spatial Experience Design in Immersive Media: Analysis of the Las Vegas Sphere Cases

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Abstract

This study investigates how immersive media content expands spatial experience by reconfiguring human perception, cognition, and emotion. Using the Las Vegas Sphere as an empirical site, two representative works—U2: UV Achtung Baby Live at Sphere and Postcard from Earth—are comparatively analyzed. Through an integrated framework combining embodiment theory, affect theory, and immersive media studies, the study identifies distinct spatial strategies involving multisensory integration, narrative design, and audience engagement. The findings reveal that immersive media transforms space from a passive container into an active experiential agent, positioning viewers as embodied participants within dynamic sensory environments. This study offers both theoretical insights into the role of immersive media in spatial design and practical implications for future content production across media art, performance, cinema, and exhibition contexts. Ultimately, this study highlights the profound potential of immersive technologies to redefine our relationship with built and virtual environments.

Keyword : Immersive Media, Spatial Experience, Immersive Cinema, Las Vegas Sphere, Multisensory Design

1. Introduction

The rapid advancement of media technologies has increasingly dissolved the boundaries between disciplines such as art, performance, exhibition design, architecture, and urban planning. This convergence has given rise to a new creative paradigm-immersive media-which engages the human sensory system in novel and integrated ways. Immersive media content surpasses traditional audiovisual experiences by offering multidimensional environments that engage the viewer's body, emotions, and cognition. Its emergence signals a significant shift not only in the evolution of media art but also in the conceptualization and design of space itself. The environments in which immersive media unfolds are no longer passive sites for content display; rather, they are being reimagined as dynamic, interactive spaces where viewers actively engage with content in real time. This transformation highlights the pivotal role

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Received(May 5, 2025), Review Result(1st: May 28, 2025), Accepted(June 13, 2025), Published(June 30, 2025)



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of immersive media in generating spatial experiences that transcend physical constraints and extend into emotional, psychological, and multisensory dimensions [1].

Recent international scholarship further expands this discourse. Lombard & Ditton's presence theory emphasizes how immersive environments generate a psychological sense of "being there" that fundamentally alters spatial cognition [2]. LaViola's work on embodied cognition highlights the role of sensorimotor coupling in VR/AR environments, where physical interaction enhances narrative comprehension and engagement [3]. Manovich introduces the concept of augmented spatial storytelling, in which digital layers restructure both narrative and space, producing new multisensory and interactive configurations [4]. These theoretical frameworks collectively inform the evolving relationship between media technologies and spatial experience.

The Las Vegas Sphere, inaugurated in 2023, serves as a leading example of this transformation. As the world's first large-scale immersive performance venue, the Sphere integrates immersive media directly into its architectural and technological infrastructure, utilizing 16K resolution LED panels, spatial audio systems, haptic feedback, and environmental simulation technologies such as wind and scent [5]. Unlike earlier forms of immersive media limited to theme parks or museum installations, the Sphere operates as a comprehensive immersive laboratory that fosters interdisciplinary collaboration across media art, architecture, UX design, and performance production.

This study examines how immersive media content at the Sphere redefines spatial experience, focusing on two representative cases-U2: Achtung Baby Live at Sphere (immersive performance) and Postcard from Earth (immersive cinema). By analyzing these cases, the research explores how technical components, narrative structures, and emotional delivery methods coalesce to create multisensory, emotionally resonant environments.

The objective of this study is to present an integrated analytical framework for understanding immersive media's impact on spatial design, and to offer strategic insights for its application across diverse domains including urban spaces, performing arts, exhibitions, and education. Ultimately, this study argues that immersive media constitutes not simply an entertainment innovation, but a transformative medium for restructuring human sensory perception, spatial cognition, and cultural experience.

2. Spatial experience of immersive media content

Immersive media content refers to media forms that integrate diverse sensory extension technologies to

generate heightened immersion and presence for viewers. Unlike traditional audiovisual media, immersive media designs comprehensive sensory and emotional experiences that engage not only perception and sensation but also emotion, memory, and embodied interaction [4]. Theoretical frameworks such as embodiment theory emphasize that cognition is grounded in bodily interaction with the environment, whereby movement, sensation, and physical engagement contribute directly to meaning-making. Simultaneously, affect theory highlights how sensory stimuli generate pre-cognitive emotional responses that shape user experience and memory formation [5].

A defining characteristic of immersive media is real-time responsiveness. Unlike conventional media, which delivers fixed narratives, immersive content dynamically adapts to user behavior, location, gaze, or emotional state through sensing technologies and advanced algorithms. This transforms content into a multi-layered experiential construct that is simultaneously informational, spatial, and affective [6]. In immersive environments, space itself becomes an active medium rather than a passive backdrop, functioning as an experiential platform where technology, sensory input, and narrative coalesce in three-dimensional configurations.

Spatial experience, within this framework, involves comprehensive human engagement with physical or virtual spaces via perception, sensation, emotion, memory, behavior, and cognition [7]. It extends beyond visual recognition to encompass lived experiences that influence identity, mood, and social interaction. As shown in [Table 1], Five interconnected dimensions define this spatial experience: perceptual (form, light, scale), sensory (sound, touch, smell), emotional (affective resonance and memory), social (community interaction and co-presence), and symbolic (cultural meaning and narrative interpretation) [8].

[Table 1] Theoretical Framework of Spatial Experience in Immersive Media

Dimension	Key Components	Relevant Theory
Perceptual	Form, Light, Color, Scale	Media Ecology
Sensory	Sound, Touch, Smell	Embodiment Theory
Emotional	Mood, Memory Formation	Affect Theory
Social	Community, Co-presence	Social Presence Theory
Symbolic	Cultural Narrative, Meaning	Cultural Theory

The introduction of immersive media has further expanded these spatial experiences beyond physical structures, transforming locations into dynamic archives, imagined environments, or abstract simulations. Immersive media actively reconstructs space through sensory augmentation and narrative-driven interaction, generating flexible and adaptive spatial constructs that blur boundaries between reality and

simulation. In this process, viewers become embodied participants immersed in evolving spatial narratives rather than passive observers. Consequently, the role of the spatial designer transforms into that of an experience composer, orchestrating sensory stimuli, temporal flows, technological interfaces, and emotional cues to create immersive experiences.

In this study, the selection of U2: Achtung Baby Live at Sphere and Postcard from Earth as case studies was guided by their representativeness in showcasing distinct modalities of immersive media currently implemented at the Las Vegas Sphere. U2: Achtung Baby exemplifies large-scale immersive performance, where real-time musical performance is integrated with dynamic visual projections and audience interaction, emphasizing the fusion of live performance and immersive scenography. In contrast, Postcard from Earth represents immersive cinema, utilizing pre-produced, high-definition multisensory content that foregrounds narrative-driven spatial storytelling and environmental simulation. These two cases collectively capture the technological, sensory, and narrative spectrum of immersive media content, thereby providing a comprehensive basis for analyzing the spatial experience dimensions.

3. Analysis of Immersive Media Content Examples

3.1 Technical features of the Sphere in Las Vegas

The Sphere in Las Vegas, inaugurated in September 2023 in Nevada, USA, represents a groundbreaking example of next-generation immersive media architecture. Conceived as an immersive cultural complex that synthesizes technology, art, and spatial design, the Sphere redefines the role of the venue as both medium and experience. As the world's largest spherical structure-with a diameter of approximately 157 meters, a height of 111 meters, and a total floor area of roughly 80,000 square meters-it stands as a monumental platform for sensory and technological convergence. The venue can accommodate up to 20,000 spectators, of which approximately 10,000 seats are equipped with multisensory feedback systems, including haptic vibrations, wind effects, and scent emission.

The Sphere's interior is enveloped by the largest curved LED screen ever constructed, boasting an unprecedented resolution of 16K and covering a surface area of approximately 14,800 square meters. This expansive screen surrounds more than 270 degrees of the audience's visual field, enabling a near-total visual immersion into the content. Complementing this visual infrastructure is a sophisticated auditory system built on Holoplot's X1 Matrix Array. This system integrates 1,586 fixed speakers with an additional 300 movable modules, totaling 167,000 individual speaker drivers. This configuration allows for pinpoint-accurate spatial audio, with individualized sound fields tailored to each seat-delivering a

personalized auditory experience to every viewer. Externally, the structure is encased in a massive media façade known as the “Exosphere.” This surface, composed of 1.2 million programmable LEDs and spanning approximately 54,000 square meters, transforms the exterior of the Sphere into a dynamic digital canvas visible across the Las Vegas skyline. The Sphere's content transmission infrastructure is equally advanced in order to utilize data transfer speeds of up to 400 gigabytes per second and a storage capacity of 4 petabytes. These capabilities support real-time rendering, interactive processing, and the seamless transmission of ultra-high-definition media content. Combined with sensor-based feedback systems, this technological foundation maximizes the immersive impact of the media presented within the venue [2].

The Sphere opened with U2: UV Achtung Baby Live at Sphere, a high-profile concert by the globally renowned rock band U2. The performance leveraged media art, immersive lighting, and real-time performance technologies to transform the space into a multisensory stage. The venue's second flagship presentation, Postcard from Earth, directed by filmmaker Darren Aronofsky [9][10], exemplifies the fusion of cinematic narrative with immersive media technology. The film explores themes of environmental crisis and the future of humanity, transforming the theater into a fully sensorial and emotionally charged experience. Both productions utilize the Sphere not merely as a site for content display but as a dynamic platform that activates the audience's entire perceptual system. Functioning as an ‘experience platform,’ the Sphere surpasses conventional boundaries of genre and media. It operates as a hybrid cultural space that integrates performance, cinema, exhibition, and interaction, blurring the lines between spectator and environment.

In this context, content does not simply fill the space-it defines and configures it. The media becomes the organizing principle of spatial structure and sensory choreography. As the only facility of its kind capable of delivering such a comprehensive immersive experience at scale, the Sphere holds significant potential as both a global icon and experimental testbed for the immersive media content industry. It serves as a concrete example of how the integration of technology and artistic vision can transform spatial experience, signaling new directions in cultural production, experiential design, and media architecture.

3.2 Analysis of Spear's content examples

As shown in [Fig. 1], U2: Achtung Baby Live at Sphere serves as a representative case that vividly illustrates how immersive media content can synthesize performing arts with spatial experience. Far beyond a conventional musical performance, this work constitutes a multi-sensory experience fully

realized within the immersive media environment of the Sphere, offering empirical evidence of how such content transforms physical space into emotionally and perceptually dynamic stages.



[Fig. 1] U2:UV Achtung Baby Live at Sphere, 2023

First, in terms of visual immersion, U2: Achtung Baby Live at Sphere fully utilized the venue's 16K-resolution curved LED display to deliver a highly enveloping visual experience. The massive screen extended across the entire front of the performance hall, effectively dominating the audience's field of view. Owing to its curved configuration, the screen created compelling optical illusions and spatial immersion effects—often described as “situated presence”—that made the audience feel as though they were physically embedded within the depicted environments. In this context, the screen functioned not merely as a media façade but as a transformative, three-dimensional media sculpture that redefined the spatial logic of the stage. Auditory realism constituted another central axis of immersion.

The Sphere's Holoplot X1 Matrix Array system, which employs beamforming technology, allowed for directional control and modulation of sound waves, thereby delivering acoustically optimized audio to each seat. This technology enabled a high-resolution spatial soundscape in which each audience member experienced a personalized auditory environment. Such “personalized immersion” exemplifies a core trait of immersive media content, where sonic engagement is finely calibrated at the level of the individual. Tactile and environmental stimuli also played a pivotal role in constructing a comprehensive spatial experience. The venue's seating was equipped with haptic feedback mechanisms synchronized to visual and auditory stimuli. These systems activated non-visual sensory inputs—including vibration, airflow, and

scent-to stimulate the full spectrum of the human sensorium. This multisensory integration illustrates how immersive media content can extend beyond conventional audiovisual experiences to reorganize bodily perception as a whole [9]. As a result, the performance space was reconstituted from a conventional “space of viewing” into a dynamic “space of embodied experience.” These immersive technologies were closely interwoven with the content of the performance. In the opening sequence, for instance, the LED screen presented a sweeping night view of downtown Las Vegas, which gradually morphed into an expansive desert landscape. This visual narrative constructed a layered sense of immersion, wherein the actual performance space coexisted with its virtual counterpart. Audiences were thereby situated in a hybrid temporality-experiencing the “here and now” while simultaneously being transported to an “elsewhere” in both time and space. This narrative-driven spatial transition underscores the capacity of immersive media to mediate between temporal and spatial registers.

The performance also incorporated interactive media art elements that dissolved the boundary between performer, audience, and media. A notable example was Marco Brambilla’s *King Size*, an AI-integrated video art installation that deconstructed and recombined imagery of Elvis Presley. The work thematically connected Las Vegas’s cultural symbolism with the performative identity of the Sphere itself, reflecting on media saturation and historical spectacle. These components emphasized the capacity of immersive media to fuse urban iconography, music, and spatial storytelling into a unified experiential layer. In the latter half of the performance, real-time interactions were introduced through audience members’ smart devices, which synchronized specific light waveforms and text animations with the stage environment. This sequence exemplified an interactive immersive experience, wherein content dynamically responded to the audience’s physical engagement.

Such a participatory structure blurred the architectural limits of the venue, rearranged the perceptual boundaries surrounding the audience, and fostered the emergence of an expanded sensory community. [Fig. 2] *Postcard from Earth* is an immersive cinematic work presented at the Las Vegas Sphere beginning in October 2023. Directed by Darren Aronofsky, the film integrates immersive media technologies with an environmental narrative, establishing a new model for spatially designed, narrative-driven media. Positioned at the intersection of documentary, fiction, and visual essay, this work seeks to expand the viewer’s perceptual horizon through a highly orchestrated audiovisual narrative. Designed specifically for the Sphere, *Postcard from Earth* exemplifies immersive cinema’s potential to reconfigure spatial storytelling as an affective and experiential domain.

Postcard from Earth is presented as a “love letter to the Earth” from the human perspective, capturing both natural landscapes and civilized environments from across the globe through

ultra-high-resolution live-action cinematography. Filmed using a dedicated 18K camera system, the work is projected on the Sphere's 16K curved LED display, which fully envelops the interior space. This combination achieves exceptional visual realism and immersive depth. The curvature of the screen expands both horizontal and vertical fields of view, diffusing the viewer's visual perception multidirectionally and inducing deep spatial and temporal immersion. The screen configuration deviates from conventional frontal projection by dynamically reorienting visual composition across the full spatial envelope, in accordance with narrative flow. For instance, in scenes simulating submersion or atmospheric reentry, the visual content rotates vertically and horizontally, enabling the audience to experience a sense of "passing through" space. This three-dimensional immersion-impossible within the flat frame of traditional cinema-exemplifies the spatial fluidity unique to immersive media environments.



[Fig. 2] Postcard from Earth at Sphere, 2023

The auditory dimension further reinforces the spatial reconfiguration of perception. Utilizing Holoplot's X1 Matrix Array system, the audio is spatially distributed with precision according to each seat's location. This "acoustic localization" reproduces the fine-grained textures of natural environments while enhancing emotional resonance in key scenes. Sound, in this context, transcends its role as a narrative aid to function as a sculptural element of spatial atmosphere-shaping perception as much as supporting content. A central structural characteristic of immersive media, prominently employed in *Postcard from Earth*, is spatial sequencing. Rather than organizing scenes based on the geographical continuity of filming locations, the content is arranged according to emotional rhythms and thematic transitions. This

deconstructs conventional notions of time and space, allowing for emotion-centered spatial editing. For example, the abrupt juxtaposition of chaotic urban noise and war imagery with a serene Arctic glacier sequence constructs spatial meaning through affective contrast and residual emotional intensity. In doing so, the film externalizes the audience's inner experience, using space as an emotional vector [10].

Multisensory stimuli further intensify the immersive transformation of spatial experience. Haptic vibrations, ambient airflow, and olfactory cues are synchronized with scene transitions to evoke tactile and environmental responses. In sequences featuring wind-swept deserts or ocean dives, actual shifts in air currents are introduced in real time, stimulating the audience's physical senses and contributing to a profound sense of spatial "presence." This real-time sensor feedback creates a bodily engagement that extends beyond sight and sound, exemplifying one of the core experiential mechanisms of immersive media-immersive presence. Narratively, *Postcard from Earth* adopts a sensory essay structure rather than a classical three-act framework. This approach is particularly well-suited to immersive media, which relies on sensory modulation, image manipulation, and rhythm rather than plot development. The progression of the narrative is fluid, aligning more closely with the audience's emotional state than with predetermined story beats. In this format, space ceases to function merely as the backdrop for the story and becomes the story itself-constructed, felt, and inhabited by the viewer.

The content also disrupts the dominance of the human gaze through camera work grounded in an omniscient or decentered point of view. Aerial perspectives, close-ups from the vantage of animals, and shifting viewpoints deep underwater challenge the traditional subject-object relationship and allow audiences to experience sensations that transcend bodily limitations. This represents a decentralized spatial perspective, encouraging viewers to inhabit perceptual frameworks beyond the human sensorium.

In sum, *Postcard from Earth* successfully orchestrates a multi-layered, sensory-driven spatial experience through the integration of high-resolution visual media, spatialized audio, haptic feedback, and environmental control. It exemplifies how immersive media content is evolving into a comprehensive experiential art form-one that not only showcases technological innovation but also choreographs emotion, cognition, and perception. This case affirms the potential of immersive media to redefine spatial storytelling and to pioneer new aesthetic paradigms rooted in full-spectrum human experience.

3.3 Analysis of content production types

As shown in [Table 2], U2: *UV Achtung Baby Live at Sphere* and Darren Aronofsky's *Postcard from Earth*-though both presented within the same venue, the Las Vegas Sphere-demonstrate markedly different approaches to sensory engagement and spatial staging as immersive media content. This

juxtaposition enables a comparative analysis of how immersive media can be configured to shape audience perception, emotional immersion, and spatial relationships in diverse ways. The two works differ fundamentally in genre: the former is a performance-based, real-time sensory stimulation experience, while the latter is a narrative-driven immersive cinema. These genre distinctions inform the design of each content's temporal flow, sensory orchestration, and interactive structure, highlighting the versatility of immersive media as a multifaceted experiential medium.

[Table 2] A Typological Analysis of Content Direction Strategies at the Las Vegas Sphere

Content Title	U2:UV Achtung Baby Live at Sphere	Postcard from Earth
Content genre	Live performance, immersive media concert	Immersive cinema, environmental documentary narrative
Space production method	The entire performance hall is used as a stage, minimizing the distance between the audience and the performers.	Point-of-view shifts and vertical immersion within the video, and multidimensional spatial effects through the screen.
Visual immersion structure	Real-time VFX synchronizes the stage and audience's view	Viewpoint immersion and camera angle changes based on the narrative flow of the video
Tactile and environmental stimuli	Real-time feedback synchronized with vibration, wind, and fragrance	Customized haptic, wind direction, temperature, and fragrance control for each scene
narrative structure	Album-based song-by-song production, emotional sequential progression	Emotion-driven sensory sequence editing
Focus on spatial experience design	Immersive performances based on sensory overload, eliciting emotional responses from the audience	Immersion based on emotional transfer, encouraging audience awareness of the world and reflection on identity
Immersion method	Audiovisual immersion enveloping the entire theater, real-time interaction	Audiovisual coordination and spatial perspective expansion, sensory immersion
Types of overall spatial sense	Real-time sensory coordination in performance spaces	Emotion-based reconstruction of narrative space

U2: UV Achtung Baby centers on live stage performance, integrating LED visual effects, spatialized sound, and haptic seating in real time. This configuration allows the audience to experience the performance as if they were situated within it, blurring the boundary between spectator and performer. In contrast, Postcard from Earth constructs an immersive narrative environment by combining ultra-high-definition cinematic visuals with carefully synchronized multisensory elements. This work guides the audience from an external viewing perspective into an internally felt world, gradually immersing them in a deeply embodied perceptual state. The two works also diverge significantly in their strategies for visual immersion. U2: UV Achtung Baby captures the audience's gaze through

high-intensity visual effects and real-time stage dynamics that utilize the full curvature of the LED screen. This design induces a state of sensory saturation and heightened immediacy. Conversely, *Postcard from Earth* employs controlled camera angles and vertical screen transitions to guide the audience's gaze inward in order to transform them from passive observers of the world into active participants in a subjective spatial experience. This contrast demonstrates that immersive visual environments can extend beyond physical optical expansion to include shifts in emotional and cognitive perspective.

Auditory immersion further illustrates this divergence. In *U2: UV Achtung Baby*, the audio dynamically responds to the performance's rhythm and choreography, emphasizing energy, intensity, and real-time responsiveness. In contrast, *Postcard from Earth* constructs layered soundscapes that reflect subtle changes in atmosphere and spatial texture, aligning sound design with environmental transitions and emotional cues. These differences underscore that even when using the same acoustic technologies, immersive spatial perception can be uniquely shaped through distinct auditory composition strategies. Tactile and environmental stimuli—such as haptic feedback, airflow, and scent—are employed in both works, yet serve different functions. In *U2: UV Achtung Baby*, these elements act as immediate extensions of the music and visuals, reinforcing rhythm and amplifying emotional intensity through synchronized sensory feedback. *Postcard from Earth*, by contrast, modulates the intensity and timing of these stimuli to reflect shifts in emotional tone between scenes, facilitating a slower, more introspective immersion. This comparison suggests that the sensory architecture of immersive media content functions not merely as a technical enhancement but as a compositional tool for emotional synchronization.

Narrative structure also reveals a key point of differentiation. *U2: UV Achtung Baby* follows a performance-based narrative aligned with the structure and emotional trajectory of its musical setlist, producing a crescendo of affect over the course of the concert. In contrast, *Postcard from Earth* employs a non-linear, essayistic structure that foregrounds emotional atmosphere and encourages open interpretation. Scenes are organized based on sensory flow and thematic resonance rather than traditional plot progression. This illustrates how immersive media can construct spatial narratives through sensory and affective sequencing, as opposed to linear storytelling.

Ultimately, both works exemplify how vastly different spatial experiences can be constructed using the same immersive media infrastructure. *U2: UV Achtung Baby* maximizes the Sphere's potential as a performance venue, positioning the audience at the core of an immediate and externally driven sensory event. *Postcard from Earth*, on the other hand, reimagines the venue as a contemplative space for emotional transition and reflection, emphasizing internalized movement and temporal dilation. These cases demonstrate that immersive media content is not defined solely by technological implementation, but by

the intentional orchestration of sensation, perception, and narrative that together reconfigure space as a medium of experiential storytelling.

4. Discussion

In U2: UV Achtung Baby, the performance space is transformed into an expansive media stage, merging live musical performance with synchronized visual and sensory stimuli. Through the integration of LED visuals, spatial audio, haptic feedback, and environmental effects, the work constructs a multisensory matrix that situates the audience at its core. This immersive environment does not simply envelop the viewer physically but engages them emotionally, creating a form of subjective immersion that transcends traditional stage-viewer dynamics. By contrast, Postcard from Earth adopts a narrative-driven approach, unfolding as a sensory essay that carefully orchestrates visual gaze, emotional transitions, and environmental stimuli. Here, the rhythms of audience sensation are externalized into spatial configurations, illustrating how immersive media can serve as a poetic medium for emotional reflection rather than as a platform for spectacle alone. The audience, in this case, does not merely watch landscapes unfold on screen but inhabits them affectively-experiencing, sensing, and connecting with the content on an embodied level [11]. Although both works utilize the same immersive media infrastructure, they diverge significantly in their spatial design methodologies and immersive logics [12].

This finding suggests that the effectiveness of immersive media content is not determined by technology alone, but by the creative coordination of sensory stimuli and the intentional construction of space. Immersive experiences, therefore, are not reducible to a singular model or formula; rather, they are adaptable systems that can be shaped according to content goals, narrative structure, and the desired form of audience interaction [13].

The findings of this study yield several key implications for practitioners involved in the design and production of immersive media content. First, immersive media cannot rely solely on audiovisual components; instead, it must integrate multiple sensory modalities and reconceptualize space as a site of experience. Second, true immersion is not achieved through technical scale or visual spectacle alone but requires narrative strategies that spatially entangle emotion, memory, and affect. Third, immersive media content should incorporate a philosophical dimension—one that challenges perception, identity, and presence-through creative frameworks that transform technological systems into emotionally resonant experiences. Moreover, by approaching immersive media content through the lens of spatial experience, this study contributes an analytical framework applicable to a range of creative fields, including media

art, performance, cinema, gaming, and exhibition design. In this framework, space no longer functions as a neutral backdrop but emerges as a “third subject”—a co-constitutive medium that integrates narrative, sensation, and interaction. This perspective reframes the essence of immersive media not as the manipulation of sensory input, but as the reorganization of sensation, offering a new paradigm for the design of affective and perceptual environments.

5. Conclusion

This study positions the expansion of spatial experience as its central theoretical framework and examines how immersive media content functions to spatialize and reconfigure human sensation, cognition, and emotion. To this end, two representative works—U2: UV Achtung Baby Live at Sphere and Postcard from Earth—were selected as case studies. Both were presented at the Sphere in Las Vegas, a technologically advanced venue specifically designed for immersive media experiences. Through comparative analysis, the study investigates the distinct immersive strategies employed by each content piece and the resulting modes of audience engagement.

The analysis demonstrates that immersive media is no longer bound to fixed genres or formats but operates as a dynamic system that transforms space into an experiential narrative. Audiences are no longer passive viewers but embodied participants whose affective and perceptual systems are fully engaged in real-time interaction.

Theoretically, this study contributes to emerging discourses on spatial storytelling, embodiment, and affective media by conceptualizing space as an interactive narrative agent rather than a static container. Practically, the findings offer design guidelines for creators and curators working in media art, performance, gaming, exhibitions, education, and urban environments. Specifically, effective immersive media design requires the orchestration of multisensory integration, emotional resonance, and interactive responsiveness to foster deeper audience engagement.

This study analyzed immersive media content from the perspective of spatial experience and proposes an analytical framework applicable to the production of convergent content across various genres, including media art, performance, cinema, games, and exhibitions. In this context, space no longer serves as a mere backdrop but operates as a third agent that embodies narrative and sensory experiences. This suggests that the essence of immersive media may be reinterpreted not as the manipulation of senses, but as the reconfiguration of sensory arrangements.

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