

Narrative Screen: The Role of Media Architecture Internalization in Enhancing Architectural Narratives

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Abstract: *This paper rigorously examines the integration of media architecture within the internal constructs of buildings to enhance narrative dimensions in architectural design. It addresses the principal inquiry of how the internalization of media components—such as digital screens, interactive surfaces, and augmented reality features—facilitates the articulation of complex narratives within architectural contexts. The concept of media architecture internalization is elucidated as the incorporation of electronic media, like screens and projections, as integral elements of interior design. Our research methodology involves a comparative analysis between traditional and emerging narrative interior designs through case studies. The study aims to explore the individual attributes and advantages of the trend of interior design media through this methodology, and attempts to summarize the patterns. This analysis reveals that these media-enriched interiors not only satisfy functional requirements but also actively engage users in narrative dialogues. Further investigation demonstrates how media architecture fosters a rich narrative experience by enabling dynamic interactions between elements like light, sound, and visual projections with the physical space, thus creating immersive narrative environments. Key findings highlight that media architecture significantly transforms the communicative dynamics within buildings, positioning them as active agents in cultural storytelling. Although visuality is a significant manifestation of media architectural experience, immersive perception, interactive narrative, and readability space are the three core important changes. These transformed spaces narrate their histories, ideologies, and societal roles, enhancing user engagement and deepening the cultural relevance of architectural designs. The paper concludes by advocating for architects to integrate narrative elements as essential components of the design process, positing that the future of architectural innovation will pivot on the strategic integration of media technologies to enrich both the experiential and narrative dimensions of buildings.*

Keywords: Media Architecture Internalization; Interactive Narrative; Cultural Storytelling.

1. INTRODUCTION

Narrative plays a crucial role in architectural design by structuring a sequence of actions and events that contribute to the creation of space, place, and cultural identity. Architects utilize narrative as a method of storytelling to imbue their designs with meaning and significance [1]. The incorporation of narrative structure as a design framework in architectural studios aligns with the educational challenge of developing spatial ideas [2]. Architects, including renowned figures like Libeskind, are increasingly aware of the intricate identity discourses surrounding their work, with narratives serving to position buildings within cultural, political, and identity contexts [3]. The narrative discourse in architectural design integrates cultural traditions, modern society, and community elements, creating a fusion that resonates with everyday life experiences [4].

In the realm of media architecture design, the integration of media architecture within the internal constructs of buildings has been a subject of interest for enhancing narrative dimensions [5]. This integration aims to create emotionally and intellectually charged environments that serve as attuned settings for significant human action. By incorporating storytelling techniques, architects and designers can evoke emotions, foster connections, and enhance the overall experience of a place [6]. Furthermore, the coupling of narratives and materials has been highlighted as a design-oriented approach to unlock embodied knowledge, supporting architects in addressing user experience [7].

Media architecture emphasises the interaction between the content of the architectural presentation and the people in the space, and the concept of interior media architecture has been developed in recent years of research (Huang et al. 2023). The introduction of this concept defines the relationship between the screen as a type of device and the indoor space, while simultaneously posing new challenges to human perception within this environment [8]. People have become accustomed to living with - and inside of - the media screen. It has infiltrated the art gallery,

its high definition, contrast ratio and immersive scale tending to blind the audience to its mediating presence [9]. This shows that media architecture has a strong potential to narrate and be understood indoors.

In summary, the discussion above leads to the research question: If interior spaces influenced by media architecture possess a strong narrative, how does this narrative differ from traditional architectural narratives? Additionally, the study aims to identify the main features and manifestations that characterize this narrative, specifically focusing on aspects such as narrative dimension, user interaction, and functional aesthetics.

2. METHOD

In this research, a case study research methodology will be used to compare and contrast architectural spaces and media architectural spaces, and to analyse them using certain narrative structures. In order to ensure the feasibility of the spatial study, samples of each of the two groups of types of spaces will be admitted and utilised to gain an in-depth understanding and awareness using Bernard Tschumi's perspective of awareness.

Bernard Tschumi's Narratology of Architecture explores the intricate relationship between space, events, and movement in architectural design. His theory challenges the traditional view of architecture as a static entity by emphasizing its dynamic and experiential nature, manifested through the interplay of events and movement within spatial constructs [10]. Tschumi's architectural philosophy views architecture not only as a physical structure but as an activated space defined by events and movement. This perspective highlights the importance of comprehending architecture beyond its physical form, recognizing it as a living environment that evolves through experiences and actions [11]. In his influential manifesto "Architecture and Transgression," Tschumi underscores the dynamic and relational aspects of architecture, seeking to disrupt conventional modes of representation in the field. By promoting a new understanding of experience through the integration of event, movement, and space, Tschumi challenges established norms and expands the boundaries of architectural discourse [12].

Narrative mapping is a mobile, geographically sensitive form of research that allows for the observation of trends and changes in formal narrative content, affective quality, and spatial arrangement in space [13]. The metrics on narrative description therein were optimised in this study, and combined with the metrics of Tschumi's research to form a narrative architecture case study logic guided by Tschumi's narrative architecture. It is hoped that through this logic, the narrative differences between indoor media architecture and indoor architecture will be uncovered.

3. FINDINGS

3.1 Sensory Multidimensionality and Mediated Warming of Spatial Narratives



Figure 1: Google Spruce Goose, Architect: ZGF Architects LLP, Completion Year: 2018. Source: https://www.zgf.com/images/L22917_00_Spruce_Goose_N168_printmedium.jpg?w=1800

The narratives of media architecture are more multifaceted, but the protagonists of the narratives are still the functions of the buildings themselves. google Spruce Goose and Terrell Place are both office spaces, and the narrative mapping divides the two projects into front office, lounge space and transport space. google Spruce Goose is a converted airport warehouse, and therefore maintains a large amount of frame structure. Google Spruce Goose was converted from an abandoned airport warehouse and therefore maintains a large amount of frame

structure, the designer narrates its unique locational elements through the exposed frame structure, and provides a large number of lounge areas for users to work informally in the interior. Terrell Place is a landmark building located in Washington, D.C., USA, and therefore, in addition to the narrative of the space, the space also highlights the identity of the landmark. Therefore, although the functions and programmes of use are similar between the two, they have different narrative logics and contexts.



Figure 2: Terrell Place, Designer: ESI DESIGN IS AN NBBJ STUDIO, Completion Year: 2016. Source: <https://esidesign.nbbj.com/work/terrell-place-washington-dc/>

In the context of narrative, a strong media of movement can potentially overshadow the narrative of space and events themselves. Figures 3 and 4 attempt to compare these two projects in terms of their expression of space, events, and movement. At Terrell Place, the introduction of electronic screens enhances the perceived dynamism of the place more than its inherent characteristics do. This means the space becomes more attractive and refreshing to people. Meanwhile, in spaces lacking strong movement media, the allure of events themselves is more pronounced. In modern spaces, screens shape and define our perception of reality. The content displayed on screens is often a simulacrum, detached from reality and sometimes replacing it. Screens dominate our senses through visual and auditory means, redefining how we use and experience physical spaces. Jean Baudrillard posits that the proliferation of simulacra leads to the disappearance of the "real." Modern society gradually loses its understanding and desire for reality, with screen content becoming the new "real." Traditionally, spatial narratives were realized through the physical environment and social interactions [14]. However, the intervention of screens digitizes, fragments, and commodifies these narratives, resulting in the alienation of space.

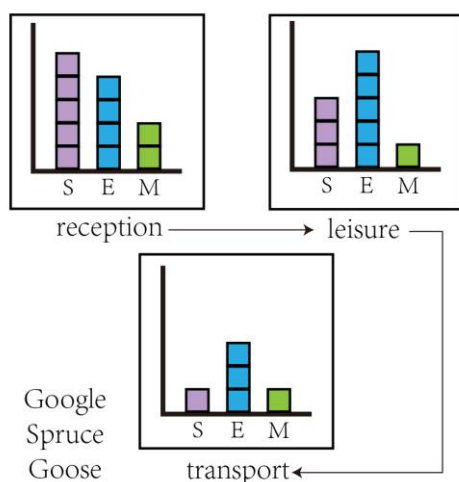


Figure 3: Narrative Mapping in Google Spruce Goose

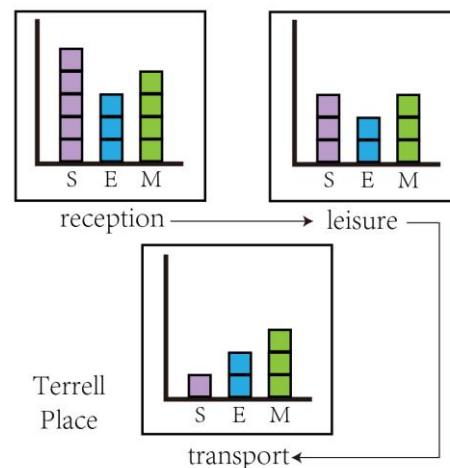


Figure 4: Narrative Mapping in Terrell Place

Furthermore, media architecture represents a shift from cool to hot media compared to traditional architectural narratives. Marshall McLuhan posited that "the medium is the message," and the means of conveying information is an extension of the medium itself [15]. In the aforementioned projects, both the architectural structures and

electronic screens can be understood as media through which space narrates its story. The key difference between these media lies in their relationship to perception. Compared to architectural structures, electronic screens can more directly and accurately convey the narrative messages of the architectural space through multiple sensory dimensions. According to McLuhan's definition, this represents a situation where the medium is "heating up." [16] However, this mediated warming comes with its own set of challenges. While electronic screens can create dynamic and engaging environments, they also risk overwhelming the traditional architectural narrative, which relies on physical structures and user interpretation [17]. The immediacy and clarity of screen-based narratives can overshadow the subtler, often more nuanced stories told through architectural forms and materials. This shift towards mediated warmth can lead to a homogenization of spatial experiences, where the unique characteristics of physical space are downplayed in favor of the standardized, often commercialized, content displayed on screens.

3.2 Electronic Storytellers and Spatially Perceived Extensions of Event Narratives

Although the screen affects the imagination of the spatial narrative, it brings some potential to the perspective of the event narrative. In the next set of case study comparisons, two similar spaces are examined, both of which are school history museums, with the difference being that the Kandin space uses traditional exhibition methods, while the GAFA space opts for a multimedia spatial form, using projections to tell the story of the space.

The integration of screens in narrative structures has significantly impacted various fields, including architecture, film, and healthcare. Screens, such as those in cinema or digital placemaking, play a crucial role in shaping spatial narratives [18]. These screens not only re-order spatial, temporal, and topical elements but also influence the narrative thread of the story [19]. The use of screens, especially in film, has been linked to the construction of situation models, where events are indexed in dimensions like time, space, causation, motivation, and protagonist [20]. Moreover, screens have been utilized to present non-linear panoramic narratives, enhancing immersive experiences through interactive storytelling [21].



Figure 5: Kangding School History Centre, Architect: Tupac, Inc., Completion Year: 2023. Source: https://img.zcool.cn/community/01d0b65e7f15f5a80120a8957c68d3.jpg@1280w_1l_2o_100sh.jpg

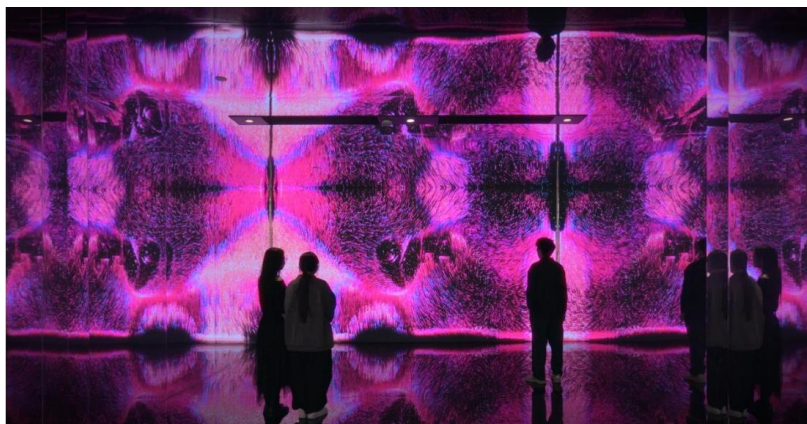


Figure 6: GAFA School History Centre, Designer: Duan Wu, Completion Year: 2023. Source: Chao Zhang

Under the narrative mapping, this group of space is compared. Research and comparison can perceive the continuous output content of GAFA space with the help of the screen, and supplement the content of the overall event narrative. The experience within a space can sometimes lead to feelings of boredom, which can impact individuals' engagement and perception of the environment. Boredom, as a fundamental mood tied to temporality, can manifest in different forms, such as superficial and profound boredom, each with specific temporal dynamics [22]. When individuals find themselves in spaces that evoke boredom, there is a potential for a change in content to alleviate this feeling [23]. Media architecture, through its ability to reconfigure spatial elements and introduce new content, can play a role in transforming the narrative of the space and influencing individuals' experiences [24]. The integration of media architecture can create a shift in the spatial narrative, offering new opportunities for immersive and affective expressions within spatial experiences [25].

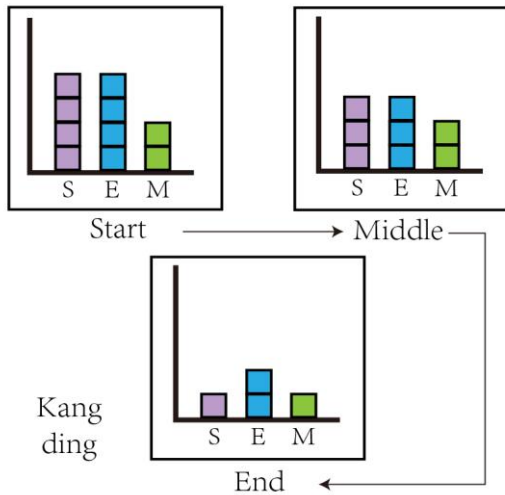


Figure 7: Narrative Mapping in Kangding School History Centre

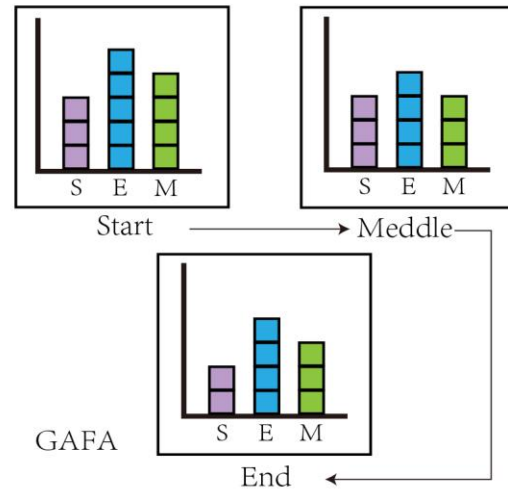


Figure 8: Narrative Mapping in GAFA School History Centre

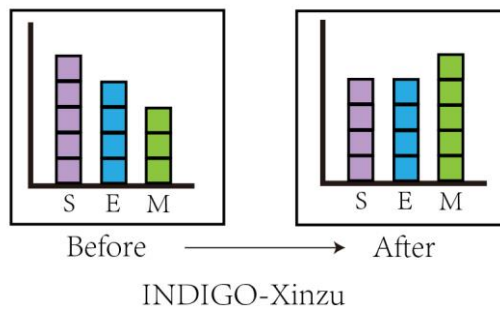
3.3 Modernity and the Dynamics of Communication in Movement Narratives

The bar at the Indigo Hotel in Taipei was renewed and revamped in the original design style, utilising a large number of media devices for spatial narrative and corresponding overall spatial design, using electronic devices for corresponding activity design, so that it conforms to the hotel's design style and at the same time creates a changeable, adaptable form of design. Modernity is typically regarded as the transition from traditional to modern society, characterized by industrialization, urbanization, secularization, scientific and technological advancements, and the rise of individualism [26]. Within this context, media architecture emphasizes instantaneous information dissemination and real-time interaction, reflecting the rapid flow of information and the immediacy of spatial experiences inherent in modernity. As a central hub for cultural transmission, media architecture employs dynamic narrative methods to effectively convey cultural content. This approach not only enhances the influence and reach of culture but also fosters greater resonance among a broader audience. The real-time interactivity and instantaneous information transfer inherent in media architecture transform spaces from static entities into active platforms for information exchange. This shift alters traditional perceptions of space and enriches and diversifies spatial experiences.



Figure 9: Indigo Hotel Taipei Hsinchu Bar renovation, Designer: Unolai Year: 2018. Source: <http://dancewithlight.com.cn/source/image/69708cd781c9bd745d83b94bbc196197c03648ec.0.jpg>

The Indigo Hotel Transformation Bar influences and shapes the new attributes of the space with a dynamic contextual perspective, utilising the characteristics of media architecture for communicative enhancement. Evaluated using metrics, the remodelling has increased the level of movement narrative, but at the same time has affected and decreased the imaginative power of the space. The role of media architecture in enhancing communication and the creation of shared spaces has been extensively explored in the literature. Media architecture has been shown to augment social cohesion by acting as a conversation starter, increasing identity cognition, and fostering community feeling through the creation and sharing of content, ultimately reinforcing people's social identity and civic pride [27]. Additionally, media architecture serves as a novel mass communication medium that can create emotional associations with the city, such as projecting national flags onto buildings and monuments, thereby engaging a large audience and enhancing the city's identity [28]. Furthermore, media architecture can empower marginalized communities through immersive technology, as demonstrated in an Australian postgraduate case study in design education [29]. Artistic resources of media architecture play a crucial role in visual communication and making an informational impact on individuals [30].



INDIGO-Xinzu
Figure 10: Narrative Mapping in Indigo hotel before and after

4. CONCLUSION

This study rigorously analyzes the integration of media architecture within building structures by combining narrative mapping and architectural narrative logic to enhance the narrative dimensions of architectural design. By connecting space, events, and movement as narrative targets, the research compares case studies of media architecture and non-media architecture. The significance of this study lies in its revelation of how media architecture enriches narrative experiences and enhances cultural relevance through dynamic interactions. This research introduces a new perspective to the field of architectural design, emphasizing the importance of integrating media technology as an indispensable element in the design process. By incorporating media technology into architectural design, it is possible to create spaces that are both functionally complete and narratively rich, thereby enhancing the overall user experience.

Narrative presents the logic of the overall story through elements such as plot and discourse. Roland Barthes emphasized the distance from "readerly" to "writerly" texts, highlighting the active role of the reader's interpretation [31]. If architecture can be understood, then the comprehension of media architecture involves an additional layer of interpretation.

Media architecture enriches spatial narratives through multi-sensory methods, increasing user engagement and interactivity. Especially at the level of immersive narratives, media architecture can transform events into a language that can be understood. By comparing traditional and media-enhanced interior design cases, it is evident that media architecture not only meets functional requirements but also actively engages in narrative dialogue. Interactive narrative becomes an important expressive attribute of spatial narratives in media architecture. Media architecture plays a crucial role in cultural narratives, transforming the dynamics of communication within buildings and becoming an active participant in cultural storytelling. Cultural readability is an important part of the grammar of spatial transfer narrativity.

However, this study also has several limitations. Firstly, the research on media architecture mainly focuses on visual and interactive aspects, neglecting the potential impacts of other senses such as touch and smell. Secondly, although case studies provide valuable insights, the limited sample size may not comprehensively represent all types of media architecture. Additionally, the rapid advancement of media technologies may render some findings obsolete as new technologies emerge.

Future research could explore several directions to build on the findings of this study. Expanding the scope to include a wider variety of media architecture projects of different types and scales would help validate the generalizability of the results. Investigating the role of other senses in media architecture could reveal how multi-sensory integration further enriches architectural narrative experiences. Additionally, examining the application and impact of media technologies in diverse cultural contexts would provide insights into how to globally promote media architecture design principles. Finally, studying the long-term user experience and psychological impacts of media architecture could assess its potential contributions to user well-being and quality of life.

In conclusion, media architecture, by integrating modern media technologies, creates rich narrative environments that bring new possibilities and challenges to architectural design. Future research should continue to explore this field to better understand and harness the potential of media architecture in enhancing user experiences and cultural narratives.

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