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Game Scenes Direct Players' Feelings and Narrative Experience Through Architectural Language

Junya Wang

Faculty of Architecture, Building and Planning, The University of Melbourne, Melbourne, Australia
junya.wang.1@student.unimelb.edu.au

Abstract. Because of the rapid development of digital media and the extended reality (XR) area, the concept of architectural space has gradually shifted from physical reality to narrative spaces in virtual and augmented reality. Moreover, game scenes serve not only as entertainment vehicles but also as important experimental platforms, constructing player behaviour and feelings through architectural language (including spatial order, scale, light and shadow, materials, landmarks, and so on). Starting from three psychological experiences: "horror space," "pleasure space," and "real space", this article explores the impact of gamified architectural language on human emotional perception and behavioural control, drawing on games such as Dead Space and Monument Valley, and some XR practical examples. This article aims to discuss how architectural elements in virtual space influence users' behaviour by using different spatial strategies. Then explore the possibility and potential value of using these design logics in real spaces and XR interactive environments. Finally aims to provide reference and inspiration for the design of future immersive narrative spaces and interactive spaces.

Keywords: Architectural Language, Game Scenes, Emotion Guidance, Narrative Experience, XR Space.

1. Introduction

Architecture is not only a physical building or shelter but also a medium for passing emotion and knowledge to the users. For example, the gothic cathedrals usually pass a sense of religious awe through their towering vertical spaces and unique method of setting light and shadow; for modern architecture, it uses fluid space and material textures to embody the spirit of times, has always subtly influenced human perception and behaviour. Because of the development of digital technologies, especially for the development of video games and extended reality (XR), the expression of architectural space has exceeded the limitation of physical conditions. Besides, this also providing an experimental space for exploring physical psychological experiences such as fear, pleasure, and exploration [1].

In the past few years, many studies have found that architectural geometry, lighting, and spatial sequence have a significant impact on emotions and attention in virtual environments. For example, research showed through VR experiments that spatial proportion and height directly affect users' cognitive attention and learning performance [2]; while research showed that changes in indoor

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"illuminance" and "correlated colour temperature" also have a significant impact on emotions, and this effect is further enhanced in immersive virtual environments [3]. At the neurocognitive level, research also proved that different "geometric shapes" often stimulate specific brain areas, thereby triggering positive or anxious psychological reactions [4].

In cultural and urban contexts, XR technologies also modify habits of architectural storytelling. research find "field of view (FOV)" and "interaction latency" of mixed-reality equipment directly affecting the "immersion" of museum goers [5]; some studies, through bibliometric studies, indicate immersive technologies becoming a novel trend in cultural-heritage conservation and experiential city planning [6, 7]. Together these studies attest that XR is not only a display technology but also a fundamental lever for spatial storytelling and affective design.

Therefore, based on existing research, this paper constructs an analytic model of "horror space—pleasure space—real space" to examine systematically how architectural syntax guides users' emotional experience and narrative engagement in virtual and real-life environments.

2. Overview of relevant concepts

2.1. Theoretical framework

Narrative theory of architecture holds that space itself serves as a medium for the creation of emotions and meaning. Spatial organization, light-dark rhythms, and path structures not only guide user behaviour but also connote narrative flow. Psychological and environmental studies of behaviour show that oppressive environments (e.g. confined, dark) normally generate tension and fear, while open and light environments lead to relaxation and enjoyment [4].

In virtual worlds, architectural language is more literal and explicit: the visual and corporal experiences of the player merge in an immersive context, and spatial language becomes a resource for emotional control—especially through effects such as "presence" and "body ownership" [1]. As background for this, this paper analyses narrative and emotional processes through three ordinary experiences.

2.2. Horror space

The horror space architectural language is characterized by the use of oppressive and depressing scenes. Limited visual conditions, and a sense of the unknown actually contribute to tension and fear among users. A great example is the tram hall corridor in Dead Space: narrow corridors, faintly lit lights, and dark areas together create a spooky effect. The shrinking of space compels players to follow a linear path, and the ambiguity of light and darkness incessantly suggests the presence of threat, transforming the whole setting into a "theatre of horror" [3].

For architectural design, this logic can be further applied to training or safety education spaces: by adjusting spatial compression and lighting/illuminance controls, users can be induced into specific psychological states to enhance learning and memory [2].

In conclusion, the combination of “repressive sequences + low lighting + ambiguity and uncertainty”, can effectively change or lead users’ emotions.

2.3. Pleasure space

Pleasure space produces positive affect through "visual paradox" and exploratory spatiality. The video game Monument Valley uses "impossible geometry" to lead the users get joy from discovery amidst perceptual illusion. Neuropsychological research has shown that experiences of “surprise”

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activate the prefrontal cortex and the brain's "reward system", which in turn stimulate exploratory behaviour and creative thinking [4].

In physical buildings, this "cognitive transformation" process is widely used in museums and schools: non-linear paths and sometimes changes in lighting prompt and motivate users to remain engaged and interested [6].

Pleasure spaces are based on a process of "visual conflict + cognitive transformation". One of its advantages is its widespread application in settings that need to stimulate users' curiosity and exploration, such as museum exhibitions, learning spaces, and resorts. Providing unfamiliar spaces or interactive installations can make users feel freshness and interested during the exploration process.

2.4. Real space

The architecture of real space is primarily minimalist and concerned with continuity and direction. For example, the sculptural form of Guggenheim Museum Bilbao in Spain serves as a strong visual "landmark" that calls out to be viewed [8]. The riverfront exterior landscape and the pedestrian walkways leading up to the building are used in concert with each other to create a unified urban narrative rhythm where visitors can get the eventual feeling of heightened psychological expectation and fulfilling it in the buildings as one approach the site [9].

2.4.1. Landmark

Frank Gehry's museum complex is the most powerful psychological presence in the location. Its sculptural, asymmetrical form is a remarkably potent visual "landmark" on the Nervión River. This landmark not only serves as a distant attractor at the urban level, triggering an immediate desire for the people to "go and see", but also generates a psychological atmosphere of surprise and novelty. It is a constant visual reference point and directional guide along the visitor's spatial path.

2.4.2. Progressive sequence unfolds narrative rhythm

The walk to the museum from the opposite side of town is a "progressive sequence": Santiago Calatrava's Zubizuri pedestrian bridge and Norman Foster's glass metro station. Their transportation design strategies create a textured journey.

Therefore, the experience of the visitor is not fleeting; instead of focus shifts, the image of the museum changes from a distant silhouette to the central facade, then to the texture and detail of the material. It is to adhere to the logic of architectural narration: "opening—development—turn—conclusion", continuously capturing the attention of the visitor and providing early payoff, thereby retaining and inspiring visitors.

2.4.3. Interactive triggers deepen spatial narrative

Within the greater series of landmarks and routes, there is also a micro-level "interactive trigger." It comes in two great forms.

Physical interaction is the first. The open squares and riverside promenades allow one to walk around and observe the building from different directions. Physical movement itself then becomes the ultimate key to unlocking multiple ways of seeing space.

The second is content engagement. The changing displays in the museum make its underlying "narrative content" and the focal stimulus to trigger revisit visits.

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Further, such macro and micro stimuli transform a mundane "visit" into a vast "spatial narrative experience." This relation also emphasizes the role that can be played by cultural icons to trigger urban regeneration by city branding, so-called "Bilbao Effect" [10].

2.4.4. Implications and applications

Bilbao's situation is a good indication of how high-quality physical spaces can be an extremely powerful "psychological suggestion system." That is, cities and buildings that are planned for rhythmic spatial sequences with multi-layered cues in their design can effortlessly guide the visitor to discovery. These spaces provide both emotional and intellectual satisfaction to the visitors. With the introduction of XR technologies, this spatial logic became even more powerful and dynamic. For example, by overlaying digital information onto physical landmarks in the form of AR or situating VR narratives that must be triggered in proximity (such as the Louvre's Mona Lisa project), one can effectively transform the city into a "dynamic narrative stage." Here, the fixity of physical space and the plasticity of virtual information are jointly guaranteeing that architecture is no longer passive background but interactive, co-narrating affective field that communicates with humans in real time — idealistically justifying the paper's general vision of future space.

Therefore, in XR spaces, this "landmark—sequence—trigger" reasoning is even more reinforced. Through the overlapping of information by augmented reality, the urban space can be reconfigured as a programmable narrative platform, in a way that users' behaviour and emotion can interact with space [7].

3. Categorized discussion and future outlook

Of the three types of space, one can see that a transferable coupling chain of "spatial language—emotional response—narrative engagement" is created: geometry and scale determine the emotional key; light and materiality modulate the degree of arousal; landmarks and paths organize the temporal rhythm of narrative. In immersive media, the chain is further supported by "presence" and "body ownership" [1,3,4].

The goals and boundaries of the three spaces differ. Horror spaces enable vigilance through low illuminance, compact scales, and uncertain cues; when the stimulus threshold is too high, it could produce fatigue or avoidance, and therefore upper boundaries must be defined using physiological/behavioural measures [2,3]. Pleasure spaces rely on the intellectual transmutation of "paradox—discovery," where peaks are visible but repetition spoils; freshness can be extended through staged unlocking and path diversification [4]. Real spaces and their XR overlays are focused on long-term engagement and public accessibility; constrained by safety and operations, they can maintain exploratory motivation at the urban scale through "landmark—progressive sequence—trigger" [8,9].

For research and evaluation, it is recommended to adopt a tri-modal framework of “subjective scales + physiological signals + behavioural data”: use valence/arousal and “presence” scales to characterize experience; combine HRV/GSR/eye-tracking, or EEG where necessary, to capture immediate effects of geometry and lighting; use path choice, dwell time, and learning performance to reflect narrative stickiness and achieve cross-project comparability [2,4-6].

For implementation, it is recommended to streamline the technology stack in parallel with narrative design. First, implement "parametric/procedural" spaces that modulate illuminance, colour temperature, sound fields, and path difficulty in real time based on physiological and behavioural signals, creating self-adaptive rhythms and minimizing repetition decay in pleasure spaces [2,11].

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These are the instructions. Second, pre-operatively calibrate MR devices' "FOV," "tracking accuracy," and "interaction latency" to avoid "technology bottlenecks" that compromise "immersion" and "post-experience behaviours" [5].

In urban and cultural settings, landmarks can offer long-distance visual anchors; progressive sequences linking riverfronts, plazas, and museum bodies can establish approach rhythms; AR/MR "triggers" at nodes can make "stroll—pause—rediscover" a programmable narrative loop [8,9]. Bibliometric analysis demonstrates that immersive technologies are enhancing motivation and word-of-mouth, rendering them a good fit for the operational toolkit for cultural heritage and urban regeneration [6,7,12].

4. Conclusion

This paper investigates the processes through which architectural language determines emotional and narrative experience in virtual and actual space. By comparing "horror space, pleasure space, and real space," it illustrates the roles of spatial geometry, lighting, and sequence in affective direction. The study indicates that, with the development of XR technologies, the virtual-real boundary is further broken, and architecture in the future will be an interactive, affective space. Future immersive-space design will integrate architectural vocabulary, psychological responses, and media technologies, making space an emotionally engaging field that guides cognition.

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