



Exploring the Interplay of Architecture and Cinema: A Narrative Perspective

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Abstract

This paper explores the interplay between architecture and cinema from a narrative perspective, specifically within the context of Villa Savoye's promenade. The study aims to investigate how architectural design principles and cinematic storytelling techniques converge in creating immersive narrative experiences. Through an investigation of Villa Savoye's architectural features, cinematic adaptations, and the viewer's journey, this research sheds light on the ways in which narrative elements intertwine, enhancing the overall experience within spaces like Villa Savoye's promenade. By examining the concept of the architectural promenade as a narrative within cinematic spaces, this study uncovers how the narrative qualities of the promenade contribute to enhancing the viewer's experience. It explores the reciprocal influence and enhanced storytelling potential offered by the interrelationship between architecture and cinema. Through a comprehensive methodology involving literature review, case study, and visual analysis, this research provides insights into the dynamic interplay between these two art forms, further enriching our understanding of their reciprocal connection.

Keywords: Architecture; Cinema; Film; Storytelling; Narrative; Spatial experience; Architectural Promenade.

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1. Introduction and background

Architecture and film are frequently compared, according to Schöning [1], because of their shared relationship to the visual and physical worlds. They both magnify the dimensions of the physical universe (its surface, frame, light, and depth) through their psychic images. Architecture and film only reveal their generative power when we reach the depths of our individual and collective memory, and only reveal their mythopoetic inspiration when they use their physical tools, interactions, and assemblage. It's important to keep in mind that there is a two-way relationship between architecture and cinema because these two mediums have influenced one another. For instance, architects utilized the cinematic medium to promote modern architecture in the 1920's and 30's [2]. Cinema, in turn, has used architecture and the urban environment in the portrayal of the general mood and atmosphere that a specific film intends to convey [3]. Furthermore, cinematic concerns about the effective representations of space are highly important in the audio-visual decision processes regarding mise-en-scène, cinematography, editing, post-production, and sound while making a film. *"The production of images by cinema is the epitome of the physical construction of space by architecture"* [1]. According to Starkey [4], the past, present, and future are all inextricably entangled in the world we live in along with the experienced, remembered, and imagined. There is no separation between place and event, space and mind. Together, they define one another and create a unique experience. Perhaps more than anywhere else, the world of film enables us to experience this duality. Film provides a "window" through to a different world, taking the viewer to places that may be more "real" than anything we encounter every day. Pallasmaa's text, *The Lived Image*, explores the relationship between the real and imagined in cinema and architecture. It highlights how cinema has transformed our understanding of place and time, blurring the boundaries between the real and imagined worlds, and alternating our perceptions of ourselves. This paradigm expands our imagination, with images made from real-life experiences at its core. He emphasizes the importance of image in shaping our perceptions of the world around us [5]. He added architects such as Bernard Tschumi, Coop Himmelb(l)au, Jean Nouvel and Rem Koolhaas have integrated cinematic concepts and techniques into their design vocabulary. In recent years, cinema even became part of the curriculum of architecture schools in order to discover previously undiscovered aspects of architecture [5]. Even before the invention of cinema, the practice of architecture established a close relationship between "space, movement, and narrative" through a variety of "techniques of observing architectural views," including perspectival paintings and drawings, picturesque landscape designs, cartographic maps, CinemaScope picturing, and panoramic installations [6]. According to Bruno, while various disciplines may influence one another to a certain extent, the connection between architecture and cinema can be argued to be one of the most profound [6]. Vidler acknowledges that among all the arts, architecture has a particularly specific and intricate relationship with cinema [7]. Sergei Eisenstein, a filmmaker, eloquently captures the unique and complex nature of this relationship with the following statement: *"painting has remained incapable of fixing the total representation of a phenomenon in its full visual multidimensionality, Only the film camera has solved the problem of doing this on a flat surface, but its undoubted ancestor in this capability is — architecture"* [8]. One of the first examples of this relationship between architecture and cinema can be found in Le Corbusier's villa Savoy the architectural promenade. As Le Corbusier put it while developing his concept of the architectural promenade: *"The architectural spectacle offers itself consecutively to view; you follow an itinerary and the views develop with great variety; you play with the flood of light"* [6].

2. Architecture, Cinema and Narrative

Architecture and film have long been interconnected disciplines, both focused on visual storytelling and the creation of immersive experiences. The interplay between these two art forms can be observed in how film narratives influence architectural design, aesthetics, and spatial experiences. Through the use of narrative techniques, films have the power to shape our perception of architectural spaces and inspire innovative approaches to design. Understanding this reciprocal relationship is crucial for architects, as it provides insights into how cinematic storytelling can enhance the built environment and create meaningful spatial narratives.

2.1. Architecture and Cinema: A Storytelling Relationship

The Film's origins can be traced back long before the first projected images or the invention of photography. The Acropolis was designed as a cinematic experience; the eye is led on a path structured by narrative. Auguste Choisy an architectural historian, argues that its composition is planned as if viewed by the eye of a filmmaker, offering an architectural sequence “subtly composed, shot by shot” [9]. The architect carefully choreographs the user’s experience, and his emotions could subsequently be controlled. In fact, the word ‘cinema’ is derived from the Greek word kinema – “which means both motion and emotion” [6]. It was only when the Classical era was revisited in the Renaissance that the second cinematic advancement, namely Linear Perspective, was made. Cinematic thinking was once again triggered when it became possible to capture views accurately, as the human eye perceives them [9]. Filmmakers acknowledge that encountered, remembered, and imagined experiences hold equal weight in our consciousness, evoking equal emotions. Mental spaces play a crucial role in understanding filmic spaces, aiding viewers in interpreting narratives. Cues like motion, sounds, light, and framing help us perceive the boundaries of filmic space. Film highlights aspects of physical space that architects contribute to, broadening our comprehension of both physical and mental spaces [10]. Pallasmaa furthers his discussion of cinema and architecture by commenting on the lived image as lived space by suggesting that cinema operates as lived image and architecture exists as lived space [10]. According to Kurt [11], Storytelling is a deliberate compositional procedure that is altered to convey a message. In architecture, storytelling represents a specific approach to design that is linked to the human experience. Furthermore, it facilitates the configuration and montage of spatial sequences with specific communicative aims. [12]. Ricoeur [13] believed that narrative structure could intersect the temporality of architecture with the spatiality of tale and define the communicative and psychological values of spaces. He stated: *“We can state that in the starting situation of duplex parallelism between tale-architecture and time toldspace constructed, it is possible to found an absolutely primitive reason to not abide by the simple realization of difference between storytelling and architectural design, this reason is the fact that neither the time of tale nor the space of architecture are simple portions of universal time or geometrical space”* [13]. Therefore, storytelling in architecture could be a fundamental composition system based on the notion of experience [14]. As we experience a trajectory through a series of events that form a plot while watching a film. In the course of a narrative, the author or director connects events. This is similar to designing architecture; the intentional act of relating parts to other parts or concepts to other concepts. These types of “figurations” deliberately place spatial or narrative elements in a specific order. Livesey discusses the potential linkages between narrative theory and contemporary architecture in his essay “Narrative: The Heuristic Journey” and in quoting Ricoeur: *“to imitate human actions, to make a*

plot is 'to make the intelligible spring from the accidental, the universal from the singular, the necessary or the probable from the episodic' [15].

2.2. Cinema and Narrative Structure

Film art begins when a director reformulates and combines various visually qualified shots under the influence of a written dreamed world in order to elicit different reactions in the spectator's mind and form out new meanings. It is the director's control over the combination and reformulation of space and time in the matrix of narrative, mise-en-scene, and editing/montage [16]. It is the organization of spatial and durational sequences that is divided into scenes first, and then scenes are divided into a whole series of shots that are designed visually qualified within the confines of a frame under the control of a pre-determined written text [17].

Narrative means in its simplest terms 'telling a story'. In a broader definition, it is concerned with how stories get told, how they are constructed and how a representative environment is created with the techniques of storytelling. Heath's in Narrative Space compares the space-time situation in real life and its representation in cinema. He claims that the juxtaposition of shots taken at different times and locations can result in continuous stories in filmic reality [18]. Narrative can be described as the conceptual framework that conveys ideas, emotions, or concepts through a cohesive story. It forms the cornerstone of the plot and develops through stages like synopsis, treatment, and screenplay. Events are presented in accordance with narrative tools, including causal relations, chronological order, duration, frequency, character analysis, and spatial locations. Rowe states that Narrative involves viewers making sense of their experiences, asking questions, and anticipating answers. It challenges our expectations of genre conventions and the potential for surprise or frustration. It encourages questioning the future and ending of events [19].

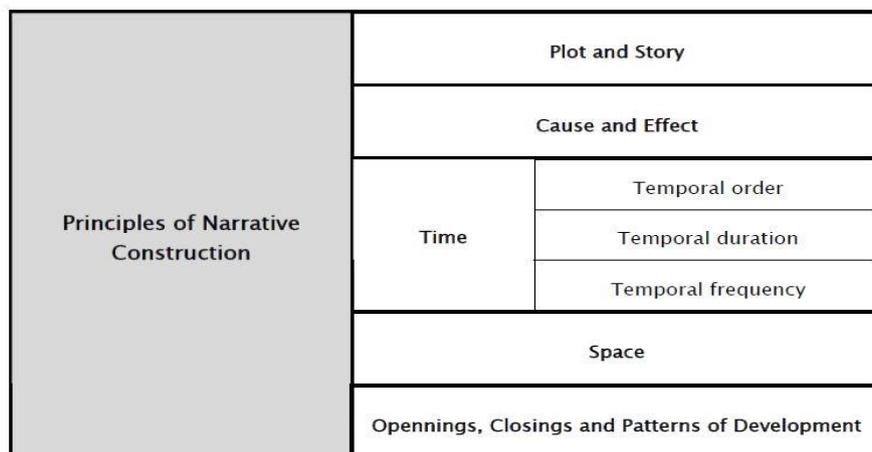


Figure 1: Bordwell and Thompson's principles of narrative construction [16].

Bordwell and Thompson [20] consider a narrative to be a chain of events in cause effect relationship occurring in time and space. According to them, "a narrative begins with one situation; a series of changes occurs according to a pattern of cause and effect; finally, a new situation arises that brings about the end of the narrative." Although all the components of this definition such as causality, time and space are thought to be

important for the narratives in most media, Bordwell and Thompson put causality and time at the center, since a random string of events is hard to perceive as a story. Therefore, they make sense of principles of narrative construction by identifying its events under a story and a plot; and linking them by cause and effect, time, space, and patterns of development as shown in Figure (1).

2.3. Spatial Experience: Motion in Space

While discussing the experience of architectural space, Schöning remarks that we must walk through space to experience it. *“The time it takes to do this gives us another consciousness of the space. But of course, that is not all, because the events that happen during our passage through the space influence our perception of it”* [1]. The motion of the camera, but not necessarily the position, height, or direction that it is generally moving in, can impact the overall experience. Sabbagh notes that the unsteady motion of a shoulder mounted camera can bring an informal look to a film [21]. In cinema, the camera can move through space as humans do through buildings. We observe through its lens within the confines of its frame. Architecture, on the other hand, defines space and creates an experience. As a result, movement is crucial in cinema; it not only dictates how and what we see, but it also defines the overall experience. Schöning reinforces this idea, describing space as something we experience through our senses in both cinema and architecture primarily through sight and sound [22]. Sight, being the primary sense in cinema, is subject to the perception of motion and thus the movement of the camera is as important as the way in which we move around an architectural space. The movement of the camera or the movement of subject in front of the camera creates an experience that will be perceived differently based on the positions, angles, and motions in the scene. Tawa says [23] *“Camera position and movement in relation to place and action are critical”*, A still camera set frontally and normal to the action that moves parallel to its picture plane will convey a very different regime of visuality and looking than one set high, shooting obliquely at an acute angle and moving diagonally in relationship to the setting and action. Tawa uses the example of Le Corbusier's Villa Savoye to combine a filmic sense of space and an architectural form and explains that the Villa has a cinematic spatial configuration in that it follows a narrative as it forces the occupant to walk through spaces to get to others. As the occupant walks the predetermined path, spaces open up in front of them. Tawa summarizes how cinema and architecture work with space in that the creative person behind them - whether architect or filmmaker - works with space in different ways due to their tendencies towards areas of creation [23]. Movement plays a vital role in the development and advancement of a narrative, whether it involves transitioning between scenes or traversing different locations. Within architecture, pathways serve as symbols of direction, movement, and circulation. Spatial pathways are recognized as a technique in cinematic choreography, reflecting the relationship between the path taken by the user and the perspective of the viewer. In film, pathways serve as visual cues that demonstrate how movement is orchestrated within a static screen [24]. This alteration in architectural thinking about spatial experience has influenced how this concept is represented. The invention of cinema aided in changing perceptions of spatial experience. Movement is the keyword in the design process. Architect uses the spatial experience as a guide to design [25]. *“To what extent could the literary narrative shed light on the organization of events in buildings, whether called “use,” “functions,” “activities,” or “programs”? If writers could manipulate the structure of stories in the same way as they twist vocabulary and grammar, couldn't architects do the same, organizing the program in a similarly objective, detached or imaginative way?”* [26].

3. Villa Savoye's Promenade: A Narrative Journey

Le Corbusier developed the concept of architectural promenade to convey spatial experiences in architectural drawings using cinematic terms. These images are presented in frames and sequential drawings, allowing the perception of space through moving visuals as shown in Figure (2). This approach enables a genuine engagement with physical space, not only by integrating abstract forms, voids, and solids, but also by incorporating the narration of human movement within those spaces. Le Corbusier said that “*Arab architecture teaches us a precious lesson. It is best appreciated walking, on foot. It is when walking, when moving, that one sees the ordering principles of architecture unfold*” [25].

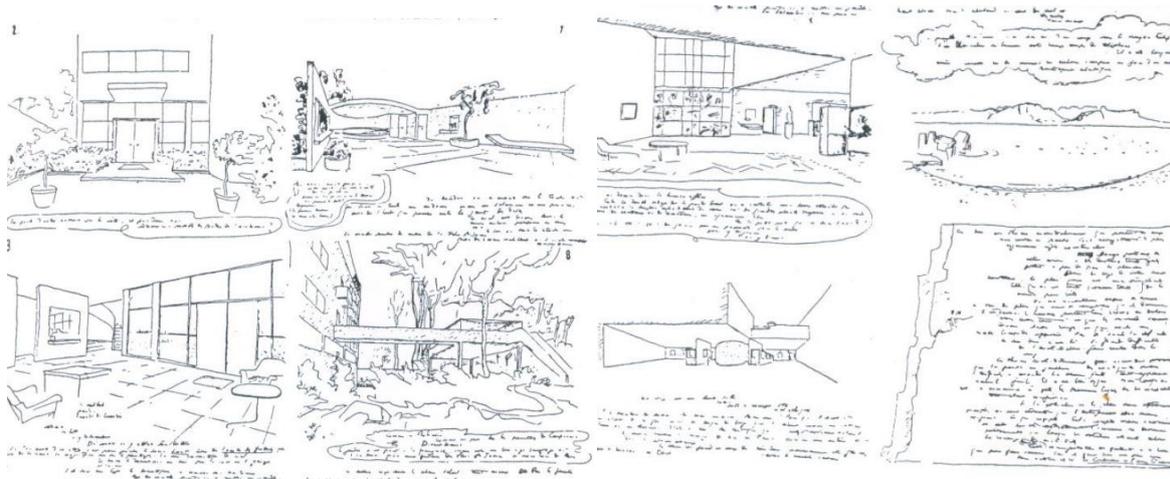


Figure 2: A Series of drawings by Le Corbusier [27].

The villa operates as a combination of spatial sequences merging across shifting levels of the planes that are sliced through by the promenade. The promenade essentially constructs a landscape-like quality which is contained within a Cartesian envelope, thus clearly and objectively defining the building, as an object in space as shown in Figure (3). It is only within the envelope that a spontaneous movement unfolds in space, irrespective of the ambiguous exterior shell of the Villa.

The journey of the promenade in Villa Savoye begins from the road and incorporates the essence of the industrial revolution by designing for the vehicle, the quintessential symbol of movement and modernity. The car is an integral component in his architecture and signifies the machine age, thus symbolically incorporating the notion of promenading into a mechanized component [28].

While the concept of the promenade can be seen as a viewpoint in its simplest form, Le Corbusier's interpretation and portrayal of the promenade go beyond a singular perspective. It is intentionally indirect and unplanned, highlighting the significance of space and time in architecture, as well as the interplay between the architectural promenade and the idea of mobility. Moreover, Le Corbusier's promenade possesses a poetic and lyrical essence that extends beyond providing multiple viewpoints to pedestrians. It acts as a mechanism within the geometric structure, seamlessly connecting spaces and generating meaningful events [28].

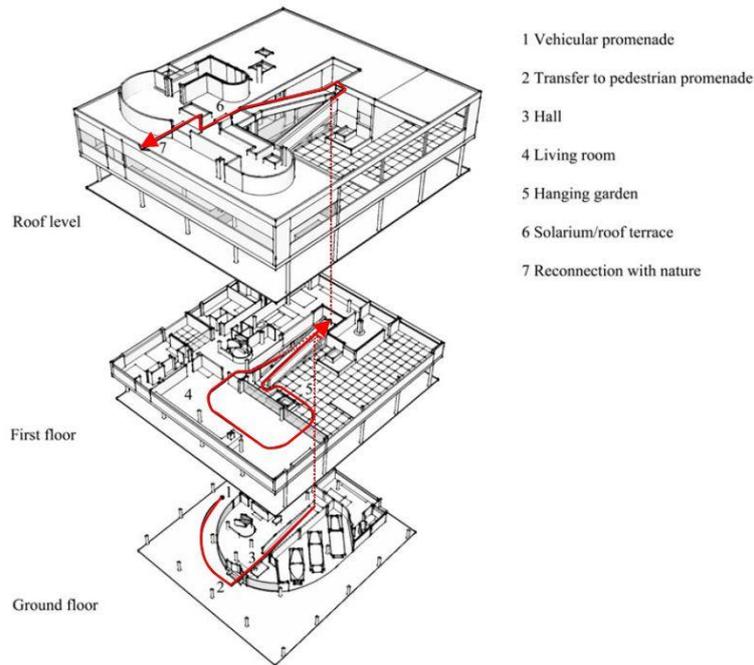


Figure 3: The promenade through the Villa Savoye [29].

Moreover, the idea of architectural promenade was further explored in a unique mode of representation in “L’architecture d’aujourd’hui” (Architecture Today). This film, created collaboratively by Pierre Chenal and Le Corbusier between 1930-31, served as a complementary tool to illustrate the concept of architectural promenade. According to Penz, the concept of “architectural promenade” was portrayed in film, drawing inspiration from narrative storytelling techniques to express the experience of space [30]. The ramp is indicated as an architectural path that is designed to follow. It is exaggerated in the drawings of Villa Savoye as well. The woman character is seen ascending the ramp as shown in Figure (4).

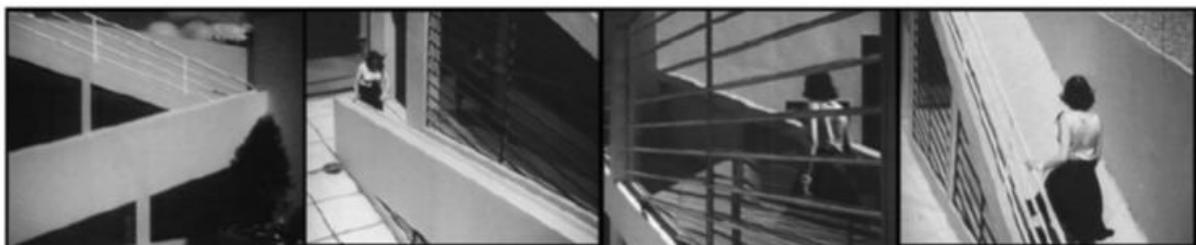


Figure 4: The Ramp Scene of the Villa Savoye (Chenal, 1930) [30, 31].

There is also spectacle eye; we are the eye of the camera. In the film, experience is constituted as spectator identified with the character; on the other hand, in the architectural drawings scenes which are indented to be perceived by the spectator are framed. Penz says “*Architectural promenade is a simple narrative device, probably the most ‘affordable’ to express spaces. It allows viewers to understand spatial relationships through identification with a character’s point of view and adherence to screen language rules.*” [30].

Le Corbusier uses the concept of framing in his design of the promenade, very similar of the technique used in cinema. He carefully plans the sequence of frames to create a visually appealing experience. In his drawings, horizontal windows take precedence over vertical ones, resembling picturesque scenes from nature.

The variation in landscape views throughout the journey from the ground floor to the roof garden -Figure (5)- in Villa Savoye is achieved through diverse framing techniques. These "frames" act as catalysts for movement and offer a continuous stream of changing perspectives as shown in Figure (6).



Figure 5: Scenes from the ramp, Villa Savoye, Le Corbusier [32, 33].



Figure 6: Scenes from Villa Savoye, as Le Corbusier framing the landscape [33].

Every frame works together to create a series of consecutive frozen scenes for the architect's intended route. Architectural promenade is not only a tool for incorporating the imagined spatial experience into the design process, but it is also a concept for generating form. Le Corbusier creates multiple layers of meaning while designing.

He creates his designs through abstraction and pure geometry. Promenade converts voids and solids into slabs and ramps.

4. Findings and Discussion

The exploration of the interplay between architecture and cinema from a narrative perspective reveals several compelling findings, shedding light on the reciprocal relationship between these two art forms. This relationship has been explored in various previous studies, offering valuable insights into their interrelationship. Pascal Schöning [1], proposes the integration of filmic techniques into architectural design processes. François Penz [2] [30], investigates overlaps between the two disciplines, and discusses the use of the architectural promenade as a narrative device in architecture. Stephen Starkey [4], explores the emotive power of film through physical space in his work on cinematic architecture. Juhani Pallasmaa [5, 10] delves into the existential nature of space in both cinema and architecture, he further examines the lived space in cinema and architecture, emphasizing the existential image. Molinari and Bigiotti [12], in their research they suggest a proposal to read and write spaces through storytelling in architecture. Many other publications investigated interrelationship such as in [6, 11, 14, 23]. These studies contribute to our understanding of the relationship between architecture and cinema, exploring various aspects such as narrative, Spatial experience, and the potential for storytelling in architectural design.

The study reveals that there is a strong convergence between architectural design principles and cinematic storytelling techniques, leading to the creation of immersive narrative experiences within architectural spaces. The deliberate composition and framing of these spaces take inspiration from cinematic shots, allowing architects to guide the viewer's gaze and influence their perception. This intentional integration of cinematic elements enhances the overall narrative experience present within architectural designs. The findings emphasize the close relationship and shared characteristics between architecture and cinema. Both disciplines engage with motion, emotion, and storytelling to captivate and connect with their audiences. Architecture can be approached as a deliberate composition system, where spatial arrangements are carefully constructed to evoke specific experiences for users, much like how narratives are created in the medium of film. The study highlights the significant role of the director in cinema, who exercises control over space and time to create narratives that produce targeted reactions and convey meaningful messages. In both architecture and cinema, narrative creation involves the use of various storytelling techniques. This includes organizing events in cause-and-effect relationships, employing a framework based on time, space, and patterns of development. These principles guide the arrangement and sequencing of spatial elements in architectural design, allowing for the creation of coherent and engaging narratives within built environments. To create compelling cinematic narratives, filmmakers must understand and employ these principles effectively. Likewise, architects can benefit from understanding and applying these cinematic storytelling techniques to enrich their designs and provide users with immersive experiences that evoke emotional responses and convey meaningful narratives.

The investigation into the interplay between architecture and cinema within Villa Savoye's promenade has yielded insightful findings. Through an analysis of architectural design principles, cinematic storytelling techniques, and the viewer's journey, this study provides a deeper understanding of the narrative perspective in this unique space.

Firstly, the promenade itself emerges as a powerful narrative device within cinematic spaces. The carefully

orchestrated sequence of frames, similar to cinematic shots, produces a series of consecutive frozen scenes along the architect's intended route. This narrative structure engages the viewer by unfolding a story through spatial progression. As visitors move from one frame to another, they experience a sense of motion in space, similar to the pacing and sequencing of shots in a film. Furthermore, the architectural features of Villa Savoye exhibit a deliberate integration of cinematic elements. The dominance of horizontal windows over vertical ones creates framed views reminiscent of cinematic shots, allowing visitors to experience scenes from nature like living paintings. This intentional framing contributes to the narrative quality of the promenade, as it guides the viewers' gaze and shapes their perception of the surrounding environment. The reciprocal influence between architecture and cinema becomes evident in the enhanced storytelling potential that arises from their interrelationship. Villa Savoye's design incorporates abstraction and pure geometry, transforming voids and solids into slabs and ramps along the promenade. This transformation not only impacts the spatial experience but also generates new forms and narratives. The dynamic relationship between architecture and cinema allows for the creation of immersive environments that evoke emotions and engage the viewer on multiple levels.

Overall, this research provides compelling insights into the interplay of architecture and cinema from a narrative perspective. The findings emphasize the potential for architectural design to learn from cinematic storytelling techniques, creating immersive spaces that engage users on both intellectual and emotional levels. By embracing this reciprocal relationship, architects can enhance the narrative qualities of their designs and create meaningful spatial experiences that resonate with viewers and users alike.

The findings of this study have to be seen in light of some limitations. Firstly, this study primarily focuses on the relationship between architecture and cinema. However, there may be other art forms or disciplines that also influence spatial experiences and narrative constructions in different ways. Also, the study focuses on the narrative structure of the architectural promenade of Villa Savoye as a case study for exploring this relationship. Finally, this study relies on qualitative analysis, drawing upon theories and visual analysis.

5. Conclusion

This paper explored the relationship between architecture and cinema within a narrative perspective, it reveals a rich and reciprocal relationship. Both fields are concerned with visual storytelling and the creation of immersive experiences. Knowing that architects have long recognized the potential for cinematic thinking in their designs, from the careful composition of the Acropolis to the advancements in linear perspective during the Renaissance. The choreography of a user's experience, as well as the ability to evoke emotions through spatial narratives, show how architecture can emulate the storytelling qualities of film. Cinema, with its ability to capture views and engage the viewer's imagination, widens our understanding of both physical and mental spaces. Understanding the relationship between cinema and narrative structure allows us to appreciate the art of storytelling in film and explore its parallels with architecture's creation of spatial experiences. Exploring the movement of the camera or subjects within a film scene contributes to the creation of various experiences for viewers, this idea can be applied to architecture, where spatial pathways and movement play essential roles in narrative development and user engagement. The study was carried on within the context of Villa Savoye's promenade which illustrates Le Corbusier's thoughtful integration of framing techniques, narrative devices, and

the interplay between space and movement which elevates the spatial experience within the promenade, which contribute to a broader understanding of the reciprocal connection between architecture and cinema, suggesting that their interplay can elevate the spatial experience and storytelling potential in architectural design. Future research can further explore this interrelationship in different architectural contexts and investigate into more specific aspects of narrative structure and spatial experience within cinematic spaces. Finally, this paper highlights the significance of considering the narrative perspective when analyzing the interplay between architecture and cinema.

6. Declaration of conflict of interests

The author declares no conflict of interests.

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