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Spatial Promenades: Sequential Experiences in Space and Time

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Spatial Promenades: Sequential Experiences in Space & Time

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A B S T R A C T

Despite the sequential nature of space, environmental designers often employ a design process driven by static mediums explored as single frame images. This process produces concepts that remain inaccessible to users as they actually experience space—as mobile observers. This thesis explores narrative methodology as an effective means to bridge the gap between design process, representation, and experience. Like visual design, storytelling utilizes tangible elements to communicate intangible concepts through their application to sequences that unfold over time. In lieu of abstract theories that remain distinct from the physical experience, the application of narrative considerations—viewpoint, sequence, pacing, and metaphor—initiates an atypical approach to the creation of space. While static representations of buildings speak to the stationary observer at a non-human scale, applications of time-based concepts yield spatial experiences that speak to the mobile observer from a human perspective. Accordingly, narrative structure establishes itself as an effective apparatus in the design process to create resonant interactions between humans and their environments. Spatial experiences are essentially a series of static images set in motion to reveal and conceal elements over time, yielding dynamic progressions through space. The design process should, in response, aim to unite both single-frame notions and the sequential experience as an ever-changing spatial promenade.
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Design Process: The Mobile User and Multiple-Frame Experience

In the typical spatial design process, architects devise concepts based on theory as a layer atop perceptual experience—an attempt to communicate abstract ideas through three-dimensional space. As Psarra writes, “Architects respond to this ordering by orchestrating relations independently of a viewer’s perception, and visualizing space as a perceptual condition, from the hypothetical viewpoint of a spatially situated observer” (Psarra, 2009, p. 2). According to Deleuze and Guattari, some designs unsuccessfully apply time-based concepts to space by the hyper-conceptualization of theories that fail to reach beyond conceptual representation and fail to connect to the user on a human scale. They add, “When static diagrams of movement are built as architecture, they incorporate movement in themselves only by accident.” (Jormakka, 2002, 81). This mindset typically yields design concepts only understood as single-frame representations (plan, section, axonometric) observed from a fixed viewpoint. In actuality, users rarely experience space in section or from a birds-eye view, but rather through shifting perspective views revealed over time. In essence, each moment in the spatial promenade impacts the moments that occur before and after. When designers conceive of concepts in terms of static processes (situated observers and single-frame spatial parts), they neglect a crucial aspect to the visitor experience. In this mindset, design concepts are rendered imperceptible as they fail to connect to the user at human-scale.

Conversely, for some designers, spatial narrative is an essential methodology for the creation of dynamic spatial progressions that lead the user through a resonant trajectory over time. From Le Corbusier’s notion of ‘promenade architecturale” to Daniel Libeskind’s Jewish Museum in Berlin, architects manipulate vistas and choreograph routes to achieve spatial drama and heighten suspense (Psarra, 2009, p. 67). The totality of the experience, in this
approach, cannot be expressed simply through a single-frame representation, but rather as kinetic parts that generate a greater whole as they tell a story over time. Designing space in terms of the shifting perspective of the meandering visitor renders dynamic, emotionally-provocative spatial promenades.

Storytellers and filmmakers explore the nature of sequential experience using various techniques that capture the interest of the user and guide them through a dynamic and emotionally provocative series of moving images. In terms of design, the understanding of narrative methodology allows designers to translate cinematic ideas into space with comparable effects and to adopt a verbal language that more effectively describes the experience of a user within a spatial promenade. The following methodology suggests a design process that considers the spatial experience as a function of time and human perception—the experience of the human body moving through space rather than as a static medium to express intangible theories through physical form. Inevitably, designers should consider single-frame instances within their work as a micro foundation to the greater, macro sequential experience. In this respect, the single-frame image and multiple-frame sequence can be effectively united, where consideration of theoretical conception and phenomenological experience coincide in a single work.

**Single-Frame Images vs. Multiple-Frame Sequences**

From graphic novels to paintings, print graphics, or digital interfaces—single images are the foundational unit of time-based experiences. Inevitably, designers communicate with images, both singular and consecutively linked, in order to clarify ideas, solve problems, interpret information, and enhance meaning alongside utility. Through the use of a fundamental visual grammar of design elements (composition, scale, color, form, contrast, repetition, texture, juxtaposition) a single piece of static imagery can communicate on numerous levels in itself. As a fundamental component of narrative, images must first communicate effectively as single units in terms of design principles before they can be integrated properly into sequence with other images.

Just as the composition of notes and chords are composed to evoke mental images in music, static instances comprise a greater sequential experience that unfolds over time. Analogous to a flipbook, a user’s spatial experience can be considered as a series of images that come together to create a unified composition of movements. In this respect, one can consider the progression through space as a series of powerful images presented in three-dimensions and revealed over time.
Opportunities for Narrative in Spatial Design

As Johann Wolfgang von Goethe once stated, “Architecture is frozen music”—a spatial experience as a function of time. The spatial designer, in the narrative sense, is both an orchestrator and author of sequential experience, movement, and interaction. As a worthy consideration in any creative discipline, storytelling possesses the ability to clarify the existing structure of reality and to form meaningful connections between creation and experience. In architecture, narrative approaches have been applied to buildings for thousands of years as seen in historic monuments, churches, temples, and ritualistic spaces. Stories add depth and meaning to otherwise utilitarian environments. Furthermore, through the proper treatment of the fundamental building blocks of narrative—structure, time, and meaning—designers establish connections with the audience’s emotions, sense of rationality, intellect, and imagination (Burke, 2010). Just as a written story or motion picture, environments possess the ability to evoke emotional connections through experiences that utilize narrative structures to create anticipation, build intensity until climax, and offer resolution to encapsulate the totality of an experience.
The Freytag Triangle & Part to Whole Relationships

The organization of a story is the path that the author constructs to guide a user through the narrative plot. Aristotle, one of the first to write about narrative theory, holistically defines the plot of a story as an “imitation of an action that has a beginning, middle, and an end.” In the 19th century, German novelist Gustav Freytag, established the Freytag Triangle (Figure 2.0) that describes a plot as a sequence of introduction (exposition), rising action, point of conflict (climax), and a falling action (resolution) that occur over time (Meadows, 2002, p. 22).

In exposition, the author institutes rules, components, and applicable systems for the narrative. The introduction of the spatial sequence begins with a framing of the spatial experience that prepares the user, sets expectations, and establishes context (Meadows, 2002). Consequently, rising action occurs as an increase in suspense that leads the audience to the conflict, where levels of tension elevate until climax. As the intensity of the experience rises, visual structures should change to reflect and emphasize the evolution of the narrative experience. In this respect, transformation to any system—lighting, materiality, pacing, form, etc…—signals significance (Block, 2001).

According to Psarra, narratives function to embody multiple experiences based on conflict and the desire to see contradictions expressed and resolved through strategically constructed schemes (Psarra, 2009, p. 86). The construction of tension creates opportunities for a counter experience to emerge, resulting in a dynamic sequence of
spatial action and reaction. With resolution comes the release of tension. At this point, the user is able to reflect back upon the collection of pieces to the progression and assign greater meaning to the overall experience. Experience is simply a function of relationships between narrative elements. The resolution clarifies how various parts contribute to the greater whole and overall significance of the narrative.

Consequently, a narrative refers not to the parts that make up an experience, but rather the manner in which those parts are structured for the user by the author. Throughout any narrative occurs a sequence of causes and subsequent effects over time—all creational actions yield either change or progression to the overall experience. The architectural importance of the commonly noted Freytag Triangle lies in the notion that a narrative sequence is greater than the sum of its parts. In space, it is not any single-frame instance that creates an experience, but rather the manner in which instances are juxtaposed and arranged in sequence to create a progression that impacts the user.

**Visual Structure**

According to Bruce Block, a **visual** exposition, conflict, climax, and resolution always exists in parallel to their narrative counterparts. Block writes, “as a writer uses words to create story intensity, a musician uses notes to create musical intensity. Now we have space, line, shape, tone, color, movement, and rhythm to create **visual** intensity” (Block, 2001, pg. 188). In film, authors create the narrative structure. Cinematographers, production designers, and editors exist to construct aesthetic subsystems that support that structure through tangible visuals. Aesthetic subsystems such as compositional frames, visual metaphor, form language, and visual rhythms either remain constant or fluctuate throughout the work in accordance to the intensity of events within the story. With this in mind, the drive behind any visual transformation is inevitably found in the structure of the story. Unity surfaces as one realizes the connections between the narrative structure and stylistic subsystems within the larger overarching experience.

**Expectation as Datum: The Role of Expectancies in Emotional Response**

Users enter any narrative experience with pre-existing expectancies constructed through cultural understandings, past experiences, and precedent. Once immersed in the story, patterns emerge through the repetition of forms and symbols that either realign existing expectancies or create new ones. Bordwell and Thompson write, “A closer look
may show that an unusual artwork has its own rules, creating an unorthodox formal system, which we can learn to recognize and respond to. Eventually, the new systems...create new expectations” (Bordwell & Thompson, 1997, p. 71). This inevitably establishes a dialogue between one’s previously-formulated ideological constructs and the expectations that the creator establishes through form and structure.

The relationship between expectation and the treatment of formal elements within a narrative is the foundation to any resonant experience. In both film and design, the creator establishes expectation through structure and then either meets or deviates from that structure to provoke emotion. As an ordering device, expectancies establish datum from which the narrative can either deviate or satisfy (Figure 2.1). Author Francis Ching, known for his writings on architectural and design graphics, explains datum in the following passage.

"A datum refers to a line, plane, or volume of reference to which other elements in a composition can relate. It organizes a random pattern of elements through its regularity, continuity, and constant presence. For example, the lines of a musical staff serve as a datum in providing the visual basis for reading notes and the relative pitches of their tones. The regularity of their spacing and their continuity organizes, clarifies, and accentuates the differences between the series of notes in a musical composition (Ching, 1995).”

Daniel J. Levitin discusses this same concept as applied to musical structure as it relates to emotion. Everyone, he claims, experiences emotions when listening to music. Most of this emotion is intentionally constructed by the composer to create anxiety (angular features, atypical scales and rhythm), happiness (major chords, rounded melodic contours, upbeat rhythm and fast tempo), etc... The most emotional pieces, however, typically have definite structures that, in return, allow elements to deviate for emotional emphasis (Levitin, 2006). Just as two pieces of music can have the same rhythm but carry different emotions through variations in pitch and timbre, two architectural spaces can evoke different responses through a manipulation of composition, sequence, rhythm, metaphor, or other visual principles. Aside from pre-existing expectations, pattern and repetition can also establish
datum. Syncopation, or deviation, can be used to depart from expectation and therefore, add excitement or interest to an experience (Levitin, 2006).

Slobada explains that strategic modifications to one’s expectancies establish violations that evoke tension, which are typically resolved through a return to one’s expectancy (datum) to maintain an overall sense of comfort. This occurs with varying degrees of expectation and varying degrees of violation to those expectations, which explain the degrees of emotional variance to different performances. However, violations must also be considered sound and “right” to be appreciated (Slobada, 2005). As Bordwell states, “an interrupted song or uncompleted story brings frustration because of our urge for form” (Bordwell & Thompson, 1997, p. 68). In other words, deviations from expectation still need to fit into the greater whole of the system. While a resolved deviation might be considered a thrill or an unique experience, simply stopping a narrative before the climax would feel unresolved and illogical. In this respect, the source of any emotion is a function of one’s expectation. Various emotions can be achieved simply through actions and their relationships to user expectation. Deviation is to surprise as delay is to suspense, withholding is to curiosity, obstruction is to disorientation, suspension is to fantasy, and fulfillment is to comfort and harmony.
RISING ACTION
TRANSLATING NARRATIVE CONCEPTS TO SPACE

CH. 3 | VIEW » Wall as Frame & Compositional Device

From writers to filmmakers, music composers, and designers—creators express ideas through a specific point-of-view. A narrative, in the simplest of terms, is a constructed perspective of a series of events—not an inclusive account of reality, but rather one’s curation of relevant facts from a particular vantage point. The fact that multiple design solutions exist to a singular problem is made possible by various interpretations of reality. In narrative, viewpoint is what distinguishes an obituary from a tragedy or a police report from a mystery (Burke, 2010).

Tschumi defines frame as “the moments of a sequence” (Tschumi, 1996, p. 166). The frame is not only the visual boundary itself, but also the framed material in view—a composition. In literature, the author reveals details to support his frame of reference and withholds details to allow for a greater impact upon revelation. In two-dimensional mediums, such as painting or graphic composition, a work begins by establishing visual boundaries, or frame. In film, the camera establishes a frame through screen space. These boundaries determine what information will be included or omitted from view in order to guide the viewers experience effectively (Meadows, 2002, p. 5). Just as a crime mystery relies on the absence of particular details until the climax, spatial experiences rely on particular visual elements being revealed over time to create suspense or provide an unexpected outcome. In the built environment, one’s interpretation of a spatial series is determined by what the user comes to observe, discover, and understand and the sequence, pace, and intensity in which elements are presented. The proper sensitivity to and arrangement of details makes it possible, through design, to create an experience that reaches beyond utility and the mundane to communicate a greater meaning.
Frame in Film

_Tideland_ » Terry Gilliam, director (2005)

Terry Gilliam’s _Tideland_ constructs environments as eerie fantasy worlds that reflect the nature of the plot. The plot depicts protagonist Jeliza-Rose, the daughter of two heroin addicts, unknowingly abandoned in a distorted reality after the death of her parents. Jeliza-Rose uses her imagination to cope with the reality of her unfortunate circumstances. The film aims to tell the morbidly tragic story from the perspective of an innocent child, naively resilient to the misfortunes that occur in the plot. Gilliam comments, “This film is seen through the eyes of a child. Forget everything you learned as an adult. Forget the things that limit your view of the world: your fears, your prejudices, your preconceptions. Try to discover what it is to be a child, with a sense of wonder and innocence” (Gilliam, 2005).

To encourage the audience to perceive the film from this perspective, Gilliam creates a _Alice In Wonderland_-esque fantasy world depicted as a distorted version of reality. To evoke tension between reality and fantasy, the environments act as accurate representations of the world as an adult knows it. Gilliam imagined a contrast between two worlds: nature and the decrepit house of Jeliza-Rose. Views of open wheat fields through wide-angled lenses convey freedom (Figure 3.0), while claustrophobic shots from within the Jeliza-Rose’s house exhibit uncanny views of a deformed reality (Gilliam, 2005). However, it is not the physical sets that establish such views, but rather Gilliam’s unique consideration of frame through camera placement and movements (Figure 3.0). Rotating camera movements take everyday views and gradually knock them off-axis to convey disorientation. Cameras placed at low levels force the viewer to see the world from a child’s vantage point (Figure 3.1). Furthermore, sharp camera angles within small, enclosed spaces create forced perspectives with immensely dynamic compositional frames unique to the viewer’s everyday vantage point (Figure 3.2).

Still Images from _Tideland_
Overall, Gilliam’s untraditional approach to the framed view provokes uniquely distorted visual compositions for the audience and conveys the feelings of tension between the reality of space and the distorted perspective of Jeliza-Rose. For the audience, the experience of these distorted frame relies not on time or sequence, but rather through the single-frame. At any single instance, the audience can experience these views as a fixed observer through the dynamic angles and distorted perspective.

DEXTER TITLE SEQUENCE » Eric Anderson (2007)

Eric Anderson’s opening title sequence for the television series Dexter manipulates the viewer’s viewpoint to transform the protagonist’s mundane morning routine into a narrative revelation of multifaceted, meaningful images (Figure 3.3). Anderson, in discussing his design approach, claims, “I think like a filmmaker. It’s been my experience that designers can get caught up in self-indulgent details foregoing larger issues like the piece’s story...how will it build excitement, anticipation, its overall impact on an audience” (artofthetitle.com, 2010). The title sequence, as an exposition to the show, can be considered a narrative in itself for its ability to manipulate the viewer’s frame of reference and essentially transport them from actual reality into the narrative reality of Dexter’s world.

Figure 3.3 | Still image from Dexter title sequence
The title sequence follows a series of actions by protagonist Dexter Morgan, known to the audience as a serial killer who targets other murders to prevent future deaths. In the spirit of the character, the sequence begins with extreme close-up shots that house allusions to murder—the squashing of a mosquito, drips of blood on a white porcelain surface, and the cutting of a flesh-like material. Anderson sets the frame to reveal only partial details of the events. Concealed in shadow, hidden outside of the frame, or blurred in the background through a shallow depth of field, Dexter’s face and body are obscured until the third-to-last close-up. The use of extreme close-ups and consideration of frame utilize Gestalt theory, where the viewer is “forced to imagine the context and complete the bigger picture” (artofthetitle.com, 2010). Utilizing the viewer’s existing expectations, the sequence allows people to make assumptions about what they see—the cold-blooded acts of a serial killer. As the sequence progresses, however, the frame adjusts to include contextual information.

Inevitably, the viewer realizes that the murder references were taken out of context. The blood is eventually recognized as a result of a shaving mishap, the “flesh” is actually ham to be enjoyed with his mourning eggs, coffee, and orange juice. The narrative is introducing Dexter’s character not as a killer, but rather as a benevolent individual with ordinary routines. The emotional effect of the meaning behind the title sequence is significant—it seamlessly transitions viewers into a new reality where it is acceptable to empathize with, or even be attracted to, a serial killer. Brylla writes, “In the case of Dexter we have an unusual example of anamorphosis: only by being placed into a more conceptual and oblique vantage point (through form and style) can we see through Dexter’s façade, accept his inner motivations and ultimately condone his killings” (Brylla, 2010).

*Dexter’s* opening title sequence is an example of *sequentially experienced viewpoint*—the experience of which depends on the frame concealing and revealing information over time. The experience, in terms of frame, relies on a series of images presented in context rather than an all-inclusive single-frame image. The camera and dimensions of screen space consciously choreograph the experience as an authorial entity. Consideration of frame revokes omniscience from the audience—the power of the narrative experience relies chiefly on perspective.

**Frame in Space**

Whereas the screen dimensions determine the frame to a film, the wall is the fundamental component used to establish frame in space. Unwin writes, “Walls are often thought of as dumb an immobile. But to an architect, a wall
is an instrument. Walls do things. They are powerful. They set the rules by which space is organized and experienced” (Unwin, 2010, p. 17).

Analogous to the single-frame examples in Tideland, viewpoints can first be considered in terms of the stationary observer. Walls choreograph the user’s trajectory and determine the user’s sightline and composition of a vista, or singular moment in time. In the title sequence for Dexter, straight on shots where the objects remain parallel to the cinematic frame make the content appear robust. Similarly, forcing a user to enter a symmetrical space on axis yields a perspective view that speaks of strength and stability (Figure 3.4). In Tideland, by contrast, low camera angles and distorted perspectives create dynamically-intriguing compositions. Along those lines, a space approached off-axis or at an untraditional height yields a perspective view enriched with dynamic angles (Figure 3.5). Furthermore, walls determine the level of intimacy between a user and objects within space. Extreme close-ups in Dexter allow the viewer to connect to the visuals and focus on micro-perspective details. Low ceilings and small spaces establish a similar frame to the close-up shot through relationships of proximity. These examples of observations can be witnessed through single-frame instances and need not depend solely on the trajectory of the user.

Beyond the functional separation of space, walls obstruct sightlines and dictate what is in view for a visitor at any given moment in the spatial sequence. Jormakka concludes, “a building can also be shaped so that as a person walks through or around it, different aspects are progressively revealed, creating the impression that the building itself is interactively changing” (Jormakka, 2002, p. 36). Walls are fundamental in establishing a sense of perspective. Like the Dexter title sequence, their placements speak of what the architect as narrator wishes to reveal or conceal as the experience unfolds over time—an example of sequentially-experienced viewpoints.
Narrative theorist Roland Barthes maintains that if narrative can be considered as comprised of individual units (catalyzers, actions, consequences, transitions, conclusion, etc…), sequential structure is defined by how the narrative units combine, intersect, and diverge. The removal or re-sequencing of any single unit will ultimately affect the way people perceive and interpret the elements of the narrative (Barthes, 1977, p. 82). This forces people outside of their existing schemas and habits and introduces new ways to look, listen, and feel. For instance, consider the following series (Bordwell & Thompson, 1997, p. 68).

- **AB** » With an existing schema of the English alphabet, one would predict C to follow.
- **AB-A** » Introducing a deviation from the previous expectations, the A establishes a pattern. At this point, one expects B to follow (AB-AB).
- **AB-AC** » Further deviation adds complexity to the pattern while establishing a new system. One can predict that AD will follow (AB-AC-AD-AF, etc…)
- **AB-AC-AX** » With X being an arbitrary deviation from the system, one will devote more attention and though to the motivation behind X. What does X mean? Why did it occur at this moment?
- **FA-DA-CA-BA** » Reversing the sequence of the elements still yields an identifiable pattern, yet requires a slightly more in-depth analysis to recognize. In this case, it might also take longer for the user to identify the pattern.
- **FA-CA-AD-AB** » Although this series uses the same elements as mentioned above (AB-AC-AD-AF), the sequence is rearranged beyond the point of cohesion. Randomly occurring elements come together to create frustration due to their lack of order. The system has strayed too far from datum to maintain perceptible order. This leads to an absence of form and meaning.
- **AC-AD-AF** » Removable of an element within an identifiable pattern (i.e where is AB?) evokes curiosity. A film sequence might leave a viewer to speculate about an unseen previous event. Likewise, placing expected introductory architectural functions in the middle or at the end of a spatial sequence changes the overall experience.

**Linear Versus Open Sequence**

Traditionally, narrative is thought of as a linear progression of text or speech. On one hand, Freytag’s Triangle applies to linear narratives that introduce a direct problem followed by a solution (Psarra, 2009, p. 87). Some experiences, however, are not constructed to follow a set path in time and space. New methods of storytelling are emerging that focus on non-linear, open sequencing. Interactive narrative experiences further the connection between storytelling and architecture as many experiences manifest as open-ended entities. Open experiences offer multiple pathways and choice for the user in how one moves within space. Divergent experiences are achieved.
through a manipulation or neglect of the traditional pyramid. For example, subplots with individual patterns of triangulation might exist within the overarching plot pyramid. The climax might be followed by a previously occurred rising action. Some narratives might even omit the resolution, intentionally leaving the audience with a sense of tension as part of the narrative. At this point, storytelling becomes more interactive by turning spectators into investigators or allowing people to formulate their own conclusions (Meadows, 2002, p. 23). Furthermore, some narratives become more interactive by introducing multiple scenarios, where the user’s experience is dictated by their individual choices, actions, and responses.

**Structure in Film**

Circular Narrative in *Pulp Fiction* » Quentin Tarantino, Director (1994)

While film has often applied slight interruptions to the linear storyline—for example, through flashbacks—it wasn’t until the introduction of non-linear video gameplay and the web-like structure of the Internet that writers began to experiment with sequential logic (Johnson, 2001). First, came Tarantino’s *Pulp Fiction*, which contains three separate plots that merge and diverge at various points throughout the narrative (Figure 4.0).

The film splices the three storylines into a series of seven running sequences. Tarantino presents the scenes out of order to achieve a complex narrative structure that strategically reveals certain facts and characters to enhance the experience in lieu of when they should logically occur. The sequences appear as follows:

1. Prologue, The Diner (i)
2. Prelude, "Vincent Vega and Marsellus Wallace's Wife"
3. "Vincent Vega and Marsellus Wallace's Wife"
4. Prelude, "The Gold Watch" (a—flashback, b—present)
5. "The Gold Watch"
6. "The Bonnie Situation"
7. Epilogue, The Diner (ii)

In chronological order, the sequences would appear with 4a, 2, 6, 1, 7, 3, 4b, and 5. Furthermore, sequences 1/7 and 2/6 intersect narratively, but are structured as separate sequences told from different perspectives. Parker
discusses the narrative structure as “an episodic narrative with circular events adding a beginning and end and allowing references to elements of each separate episode to be made throughout the narrative (Parker, 2002, p. 23). The idea of a circular narrative, where the exposition becomes the resolution as supplementary information is revealed over time, is just one approach to sequence and structure.

Reversed Narrative in *Memento* » Christopher Nolan, director (1999)

Christopher Nolan’s film and original screen play for *Memento* showcases one of the most progressive approaches to sequence in narrative film. The narrative tells a twisting story in reverse order that follows protagonist Leonard Shelby as he investigates his wife’s murder. Leonard suffers from anterograde amnesia and cannot store new memories—a fact that inspired the director to experiment with and questions the audience’s own perception of time through filmic structure (Dorn, 2001). The film draws structural analogies to the nature of memory loss and amnesia by illustrating two alternating narratives that accord to opposing timelines. First, color scenes depict Leonard’s investigation as it is sectioned into scenes presented in reverse. The film uses a forward timeline for black and white scenes that show Leonard in his hotel room as he explains the nuances of his anterograde amnesia (Figure 4.1).

The film commences with a scene that depicts Leonard shooting and killing his friend, Teddy, an event which in actuality of the plot occurs at the end. Proceeding, as each sequence begins, the audience is unaware of the previous events. Through the unique structure and sequence of the presentation of events, the audience experiences the confusion and disorientation of the protagonist in his disability (Johnson, 2001). By the film’s end, when the two narratives converge, we understand the investigation and the events that lead up to Teddy’s death. Because the scenes are not played in reverse motion, but only presented in a non-chronological order, the audience is able to pick up queues and gradually put together pieces to the narrative puzzle. Johnson described the narrative as “a head-scratcher that leaves you rummaging through the shards of your own memory, trying to piece together what
happened” (Johnson, 2001). The structural result takes a relatively straightforward plot and turns it into an interactive narrative experience full of mystery and suspense, where the user is constantly re-contextualizing the narrative as they discover new facets to the overarching storyline.

» Parallel Narrative in Run Lola Run » Tom Tykwer, director (1998)

The fast-paced narrative of Run Lola Run follows protagonist Lola as she rushes to obtain 100,000 German marks in 20 minutes. Whereas the previous examples of film exhibit non-linear structures through chronology, Run Lola Run speeds through three separate variations to the same narrative exposition. Each storyline begins with a phone call to Lola from her boyfriend, Manni, who is a small-time criminal who has lost the 100,000 marks on a train. He informs Lola of his plan to rob a grocery store in order to obtain the money to pay back his boss and save his own life. From that expositional point, the film breaks into the three separate runs—each concluding in a different resolution based on various cause and effect scenarios. To unite the three runs, Lola encounters various characters along her run to varying degrees in each version (Figure 4.2). With the introduction of these characters, flash-forward scenes appear as still frame images that depict their futures, which change according to the particular narrative run.

The divergent structure in Run Lola Run illustrates the ability for a single exposition to have different resolutions. For museum narratives, this approach could apply to narratives that occur in the yet-to-be-determined future, where the plot can present itself as a single cause with multiple effects. On the other hand, the parallel narrative structure also applies to open-ended spatial sequences. Some buildings, as previously discussed in Chapter One, lack a singular, controlled linear trajectory through space. In many spatial programs, different users will have completely different purposes and overall experiences within the same space (employees versus patrons, audience verses performer, etc.).
The ability to recognize, consider, and accommodate these varying trajectories is crucial in the success of a spatial progression with multiple user typologies.

**Structure in Space**

Some buildings establish closed routes that encourage the user to experience a promenade of spaces as an orchestrated succession of events. For example, museum narratives often prescribe an intended path for user’s to follow in order that most effectively tells the story of the museum topic. Most appropriately, a linear progression is used when the narrative includes a singular destination or resolution. In the Burrell Museum, for instance, a clockwise progression along the periphery of the plan leads the user back to the beginning of the initial experience.

In the Museum of Scotland, an alternate route allows users to bypass the exhibits to access the rooftop terrace where urban vistas conclude the experience. Ritualistic spaces also create space according to a set progression of events. Furthermore, in a residential example, Corbusier’s Villa Sovoye establishes a pathway that winds throughout the house in an upward motion to lead the user towards the climactic rooftop vista framed by a void in a wall mass (Psarra, 2009, p. 87). These paths are dictated trajectories that require the careful consideration, placement, and treatment of architectural elements in order to choreograph the user’s actions.

Architects throughout history have used sequence as a structural ordering apparatus. However, similar to how the invention of photography lead to the prominence of abstract art, the development of cinema made way for new approaches to sequence in narrative. In this respect, we introduce architecture as a means for narrative expression where guided experience is inevitably subject to the user’s will. In reality, the many project types lend themselves to a non-linear organization, where space creates a multitude of chosen paths with divergent approaches to sequence and pacing. However, that is not to dismiss the power and potential of form to choreograph an experience so effectively that the user follows a determined path. It is also possible to consider and even embrace a non-linear structure as an opportunity for multiple resolutions to occur within a single work of architecture through contradictions, interruptions, and other transformations to the narrative sequence. Overall, the permeation through, across, or upwards in a building illustrates the ability for our environments to function as spatial narrative.
In design, the experience rarely comes from the tangible. Rather, experience surfaces through the connections and sentiments that arise from a well-constructed narrative and its meaning. Within a story lie symbols and metaphors that add interest and appeal to the plot while aiding the user’s understanding of the narrative. Metaphors translate intangible ideas into tangible forms and visuals. Through their application, abstract elements within a story manifest as poignant concepts that provoke authentic emotions. Mark Wigan writes, “The viewer/reader interprets and deciphers the layers of content of the visual message from their own point of view and recreates a cultural context and meaning. Constructing meaning engages seeing, reading, intuition, analysis, perception, intellect, cognition, values, emotions, editing, selecting and the search for coherence” (Wigan, 2007, p 7). With this in mind, the message is rarely explicit. In order to create an evocative narrative experience, depth is achieved through the process of association, analysis, and discover of meaning.

Metaphors are used as analogies to draw connections between two seemingly unlike entities—the foundation for visual design and interactive media. Meadows defines a metaphor in the following passage:

“[Metaphors are] a set of symbols that has enough redundant information that a new meaning emerges…a pattern that provides a telescoped perspective on a different set of information” In the interpretation of metaphors, both the author and reader must employ a sense of imagination to fill in the gaps and create meaning from a non-representative entity. By connecting two pieces that would otherwise be disparate, allusions are amplified and a new set of meaning is generated (Meadows, 2002, p. 30).

Metaphors are created through a steady relationship between representations, where symbols come together to generate an understanding of the overarching concept of the work. Through repetition of established symbols, metaphor and subsequent meaning is realized. Repetition, unless overused or exceedingly obvious, solidifies the metaphor in the user’s mind. While metaphors are established and made accessible through repetition, introducing a variation—or deviation from the datum, as previously discussed—calls attention to the meaning behind the deviation and encourages the user to interpret the instance uniquely. When change or difference is introduced, meaning becomes explicit (Meadows, 2002, p. 110).

**Metaphor in Film**

*The Cabinet of Dr. Caligari* » Robert Weine, director & Hermann Warm, set designer (1920)
The *Cabinet of Dr. Caligari* is a German Expressionist horror film of the silent era known for its evocative environments and twist ending. The film presents the main narrative through flashbacks, where the narrator Francis meets Caligari and Cesare, a somnambulist carnival attraction. Cesare informs Alan of that he will die before dawn—a forecast that inevitably reigned true. After a sequence of kidnapping, murder, and the death of Cesare, the narrative reveals that Caligari is the director of a mental asylum who has gone insane, leaving him a tenant in his own ward. The renowned twist ending exposes the flashback scenes that dominate the narrative are actually the narrator’s delusional fantasy. The characters in the fantasy flashbacks are all inmates of the asylum under Dr. Caligari’s care.

The visual language of the environments created by designer Hermann Warm reflect the emotional undertones of the film and act as a metaphor for the corrupted mental state of the characters (Figure 5.0). Single source lighting from low angle angles creates a sinister ambiance through dark shadows, high contrast light, and chiaroscuro–like effects. The forms utilize distorted angles that represent a distorted perspective on reality. Cityscapes represented through dark alleyways and labyrinth-like pathways represent the reoccurring theme of disorientation. Wigan writes, “The diagonal camera angles, juxtapositions, and visual metaphors amplify narratives that feature moral ambiguity, obsessive behavior, sadism, and a sense of fear, menace, and anxiety” (Wigan, 2007, p 136). In the case of *The Cabinet of Dr. Caligari*, the audience can absorb these formal metaphors through single-frame instance.

![Figure 5.0](image)

*Figure 5.0 | Formal metaphor in The Cabinet of Dr. Caligari*
American Beauty » Sam Mendes, director (1999)

The 1999 drama American Beauty exemplifies the concept of metaphor as applied to a sequence of filmic images. The plot follows numerous characters through a bleak suburban, middle-class landscape as they pursue their own paths towards happiness and the American Dream. Protagonist Lester Burnham is in the midst of a mid-life crisis, where he reverts to his youthful tendencies in order to break free of his stale suburban existence. His wife, Carolyn, creates a superficial persona through material wealth and power. Lester’s daughter, Jane, hides under a blanket of insecurity as she searches for her own mean to a pursuit of happiness. Jane’s friend, Angela, latches onto superficial notions of youth and beauty to propel her aspirations to be an actress. Her boyfriend, on the other hand, is the one character who is able to see beyond the surface and recognize beauty and happiness in seemingly insignificant events. Overall, the true message of the film involves a critique of the American dream and its misguided notions of success, identity, beauty, and happiness (Millman 2006).

While the storyline is straightforward, the narrative relies on metaphor to create a subsidiary meaning behind the events within the plot. The title alludes to various symbols of American culture: the American beauty rose, youth and purity, and the American ideal of aesthetic beauty. Metaphorically, the film exhibits two visual themes: imprisonment and desire. Through cold, icy color palettes, the use of vertical “jail-like” confinements and enclosed spaces, the sets communicate that the characters are trapped in their own disillusioned suburb. At the beginning of the film, Lester often appears behind glass, behind vertical elements such as fences, or within the confines of a cubicle (Mendes, 1999).

Amongst the cold color palette, however, appear moments of crimson red that represent each character’s efforts in the pursuit of happiness (Figure 5.1). The Burnham household appears as a white, 1950’s-style suburban home with a white picket fence and glowing, red door—a representation of the appearance of happiness despite what lies beyond the façade of the house. In the beginning of the film, Carolyn is introduced as she cuts a bundle of red roses from her garden—an attempt to metaphorically harvesting the American Dream. As Carolyn cuts the roses, the metaphor communicates her desire to acquire and control her surroundings to achieve happiness (Spector, 2007). The roses appear in different contexts throughout the film with their treatment alluding to events in the narrative. We first see the roses appear as a pristine table centerpiece at a family dinner. As Carolyn’s relationship with Lester unravels, however, the roses disappear.
At a conceptual pentacle in the storyline, Ricky shows Jane a video of the most beautiful thing he has ever seen is a plastic bag floating in the wind. “It is the beauty of what simply is—existence untainted by desire—the truth”, Spector concludes (2007). The introduction of the paper bag metaphor as an alternative to the pristine rose introduces variation and, subsequently, implies significance within the narrative structure.

At the point of the plot’s climax, when he nearly indulges in a sexual encounter with Angela, Lester realizes that he has finally achieved the freedom he has been pursuing and declines Angela’s advancements. Directly following this revelation, Lester receives a fatal gunshot to the head from his disturbed neighbor. The camera pans to show a vase of freshly-cut roses, then focuses on the white porcelain tiled wall before Lester as the gunshot fires to reveal the crimson red blood splatter. The image of red roses, a metaphor for the pursuit of happiness, associated through color with the blood splatter, conveys that Lester died knowing that he had, in actuality, achieved his American Dream of transcendence and freedom (Spector, 2007).

American Beauty’s use of metaphor relies on the sequential experience of the viewer over time. While, in a still frame, the rose might evoke certain associations, the profound meaning behind the metaphor comes from the
experience of the rose in various contexts. Through repetition of symbols over a period of time, the narrative achieves greater meaning beyond any singular instance of a symbol.

**Metaphor in Space**

In design, the medium is inevitably visual and tangible. Metaphors are, essentially, a means to translate images into thoughts and communicate meaning beyond the physical realm, making way for sensory stimulation and emotional response. In *The Cabinet of Dr. Calgari*, the aesthetics of the forms are metaphors in themselves that can be experienced from in a single-frame from a fixed perspective. The silent film also relies on formal metaphors, as forms and figures (distorted angles) allude to nonfigurative ideas (disorientation) to evoke emotional ambiance. *American Beauty*, on the other hand, requires the audience to interpret the metaphors in context of the film as a whole as a series over time—the roses are ordinary objects until they are repeated over time to form relationships between form and narrative. The rose itself is symbol that comes with predisposed associations, or associative metaphor. The application of metaphor to space can transform the mundane and functional into a meaningful experience.

With the abstract nature of space, the application of metaphor to the built environment is delicate. On one hand, designers can easily communicate ideas through illustrative representations or the application of literal imagery. Translating ideas too literally, however, might conflict with the abstract formal language of a built environment and run the risk of ingenuous results. Conversely, overly-abstracting ideas renders the concept futile if the design fails to perceptibly present the ideas to the observer. The art of metaphor in space, consequently, requires a careful balance between abstract subtleties and explicit devices in order to communicate effectively in a sophisticated, artful manner. Though functional realities and programmatic requirements in architecture might dictate form to a certain extent, recognizing opportunities for abstraction and liberation from practical requirements through metaphor yields environments that offer much more than the sum of their programmatic parts. Spatial precedents found in the *Analysis of Application* chapters, such as Il Danteum and Libeskind’s Jewish Museum, provide credible and artfully executed examples of spatial metaphor.
Returning to the previous discussion, expectations not only determine if and where we expect elements to occur, but also when a user expects them. Pacing is responsible for the amount of time or space that occurs between elements within a system. In general, any visual work presents cues that elicit a particular response from a viewer, be it physical or emotive. Like beats to a song or the meter of a poem, cues are organized into systems where similarities come together to define patterns and establish rhythm. Deviation from expectations can occur by elongating the time interval between elements, by introducing an element before its expected time, or by delaying the presentation of an element in its entirety.

### Pacing and Suspense

The term *suspense* implies the delay in fulfillment of an expected event within a pattern. The feelings that arise in suspense come from a natural urge for completion (Bordwell & Thompson, 1997, p.69).

\[
\text{AB AC AD AF} \quad \text{This series fulfills expectation and evokes comfort.}
\]

\[
\text{AB AC AD A…………F} \quad \text{After the final A, one experiences suspense as they wait for the expected F to occur.}
\]

The second example is commonly used in horror films, where the knowledge of precedents make users expect to be startled or frightened. The feeling of suspense often comes from the pacing—for example, by extending a moment of repose and revealing the killer at an unexpected moment. More subtly, however, patterns can also emerge through the repetition of camera movements, lines of dialogue, musical cues, or physical movements of objects and characters (Bordwell & Thompson, 1997, p.81). In architecture, visual motifs such as reoccurring colors or forms can establish rhythm in a similar manner.

### Difference & Variation

While rhythm establishes the pace, variation is crucial in order to communicate meaning. From single frame compositions to motion-based film, repetition establishes a visual language that can be used to achieve certain results. First, breaking the rhythm creates interest. Imagine a film where every shot lasts the same duration or, even worse, where the same action occurs repeatedly until the movie ends with no resolution. The film would be mind-numbingly dull. Now, imagine a graphic composition of identical elements, such as a series of consistently spaced
vertical lines. While the patterned nature might result in a texture that adds depth in its application, it reads static at a larger scale. Thoughtfully breaking the pattern would result in a more dynamic and visually stimulating composition.

Secondly, breaking the rhythm creates emphasis and hierarchy. In the example above, which describes a series of identical vertical lines, no hierarchy exists—each line is emphasized equally. However, the introduction of a different size, color, or form would create a second level of hierarchy. A curvilinear form, for example, will inevitably stand out visually.

Lastly, and most importantly, variation in rhythm signals meaning. In a discussion of visual structure, as previously noted, the drive behind any visual transformation is inevitably found in the structure of the story. With this in mind, variation to a system should correspond to a message. Recalling the above-mentioned example once again, the curvilinear form might act as a metaphor to a more profound meaning beyond mere aesthetics—an organic entity within a rigidly structured environment, for example.

**Pace in Film**

» *Rabbit in your Headlights* » Short Form Music Video » Director Jonathan Glazer

Jonathan Glazer’s *Rabbit in Your Headlights* exhibits the ability for pacing to build anticipation through an increase in tempo. By first establishing a defined visual rhythm, Glazer constructs a resolution full of meaning through an interruption to the visual system. The narrative begins as a mysterious figure marches through the center of a busy traffic tunnel. A steady pace is initially set in exposition by the constant passing of vehicles swerving to avoid impact with the pedestrian. Suddenly, the rhythm is broken as a speeding car hits the man and continues without stopping. At this point, the impact startles the viewer. As the man rises and continues walking, however, the audience realigns their expectations to the narrative and a new rhythm is established. As cars continue to intermittently strike the man, the collisions now acts as the determinant in setting pace of the rising action. Suspense builds as the time intervals between each impact shorten. The climax comes after six impacts, when visual cues come to repose as the man removes his shirt, stops amidst traffic, and assumes a crucifix position—a counter to the increasing pace. In the resolution, a vehicle speeds towards the man only to end up shattered upon impact (Figure 6.0). The male character remains in crucifix form, perfectly in tact, as the debris settles. The resolution communicates the underlying meaning
of the narrative, the idea that the main character realizes his superhuman powers through the sinister acts committed by others. As figure 6.1 illustrates, the pace is steady, yet increasing—a montage technique referred to as “metric accelerated” (Burke, 2010). Variations to the pace indicate significant events and meaningful concepts within the work’s narrative structure. Overall, the video constructs the emotional experience evoking suspense and increasing anxiety followed by a sudden release of tension for the viewer.

**Figure 6.0** | Still frames from *Rabbit in Your Headlights*

**Figure 6.1** | Pacing diagram, *Rabbit in Your Headlights*
Luhrmann’s 2001 film *Moulin Rouge* utilizes pacing to intensify the actions in the climactic scene of *El Tango de Roxanne*. The film’s plot features the protagonist, a poet named Christian, and his courtesan lover, Satine. The two lovers must keep their romance secret, as Satine has been promised to the Duke in return for his financial investments in the Moulin Rouge. Christian, as the new playwright, authors a play that parallels he and Satine’s relationship unbeknownst to the Duke. The climactic sequence *El Tango de Roxanne*, uses parallel editing by juxtaposing two scenes to draw comparisons between the fictional play and the reality of Satine’s relationship with the Duke.

The tango montage sequence utilizes metric-accelerated montage techniques, as previously discussed, to heighten narrative tension as the scene progresses. The sequence begins with an emphasis on the play rehearsal scene with using long cuts and slow camera movements that establish pace (Figure 6.2). The second portion of the sequence maintains a similar pace, but focuses on a dinner scene with the Duke and Satine. With the play rehearsal represented through warm tones in contrast to the cool-toned dinner scenes, the distinct color palettes allow the audience to easily identify and experience the pace established through the editing of the montage. As the physical actions of characters in the play rehearsal correspond to actions between the Duke and Satine, visual rhythm becomes more noticeable. As the scene carries on by alternating between the two scenes, camera movements become increasingly fast while the length of individual shots decrease. The increase in pace through actions outside of screen space (camera movement and editing) builds suspense as the events of the narrative reach a climax. Upon resolution, the alternating rhythms and quick shots cease and two still shots are shown for extended lengths of time.

In essence, the use of strategic pacing in the *El Tango de Roxanne* sequence builds suspense, counteracted with an area of repose, that takes the audience on a dynamic, emotionally driven journey taught with tension and release.

**Figure 6.1 | Pacing diagram, Rabbit in Your Headlights**
Pacing in Space

The noted examples offer two approaches to the notion of pace. On one hand, *Rabbit in Your Headlights* establishes pace through the tangible environment within screen space rather than a change in viewpoint—an example of fixed experience pacing. Camera movements remain subtle and unobtrusive through gentle panning, intermittent close-ups, and simple editing techniques. Conversely, in the *Moulin Rouge* montage, camera movements and editing techniques define the pace. Rhythm is therefore constructed outside of screen space. This is an example of sequentially experienced pace, where pace manifests only through changes in the audience’s perspective frame rather than the contents of the frame itself.

In architecture, pace can be approached similarly. Jormakka writes, “Now, are not stairs the paramount localized time? In Venice, do not stairs rhythm the walk through the city, while at the same time serving as transition between difference rhythms?” This notions suggests that the treatment and organization of elements within space establish the pace of one’s environment like the arrangement of notes and rests dictate the pattern of movements to a dance (Jormakka, 2002, 71). Rhythm to a fixed observer relies on tangible elements to establish visual rhythm that can be experience in a single instance. Colonnades of repeating vertical elements or repetitious patterns found in materials are examples of this notion. A visitor to a space can experience this rhythm in a single frame, as a stationary observer. On the other hand, some buildings utilize the kinetic movement of the visitor to establish pace over time. Jormakka writes, “Architecture makes movement and rhythm visible through the accentuation of the observer’s own movement (stairs) or empathy with another moving person (window)” (Jormakka, 2002, 71). In this case, no singular instance is responsible for setting pace, but rather the sequential experience reveals patterns over time—such as a series spaces that alternate between areas of compression and release, or reoccurring forms that reveal themselves throughout a space.

In summary, architectural elements can be used to choreograph the movements of individuals as they traverse space. The speed of a user’s movement affects the overall perception of details within an environment. Through speed, perception becomes limited and details go unnoticed as the time allotted to each instance decreased. Conversely, slow bodily movement though space allows the user to absorb more information of their surroundings and to greater detail. The size and shape of architectural elements such as walls and stairs can either encourage or restrict movement as desired for the narrative experience. Wide linear spaces encourage quick movement, while narrow
corridors slow down the user through feelings of restriction. Elongated stair treads slow down visitors, but maintain a wide view frame that allows the user to slow their pace and focus on the details of their surroundings. Like the metric-accelerating examples above, combinations of spaces can construct a sequence where the pace increases to a point of climax.

In conclusions, Jormakka claims that plans and sequences constructed only out of utility and functional requirements neglect the opportunities in an experiential promenade. He continues, “You have to keep motivating yourself into doing things, so that your actions seem clumsy and link up like the sequences in a badly edited film. You eat, you sleep, you take a shower, but there is no rhythm; the body’s rhythm has not been synchronized with the form’s rhythmicality” (Jormakka, 2002, 74). Overall, pace is an essential consideration in creating dynamic spatial experiences.
The Neuendorf House (Figure 7.0), a holiday residence located on the island of Mallorca, was designed by John Pawson and Claudio Silvestrin from 1987–1989. The Neuendorf House examines the possibilities of the wall in architectural space through the creation of a series of spatial experiences (Unwin, 2010, p. 17). Through a dynamic narrative of suspense (tension) and resolution (release), the structure of the spatial narrative yields a dynamically resonant experience for the mobile user. It is a building that reaches beyond an abstract composition of elements to explore the modifying element of time and establish experience over a static image. The progression through the Neuendorf House is the spatial equivalent of listening to a musical composition—the experience comes not from the building design from a birds-eye view, but through spaces revealed over time and the consideration of the pace and perspective frame of the user. With a crescendo-like introduction, moments of anticipation, ambient transitions, altered pacing, and a defined climax, walking through the house adopts narrative functions to create a resonating experience for the user.

The sequential experience of the Neuendorf house is orchestrated as an emotional journey through the architectural treatment of the wall. The notion of wall acts as exposition in the narrative through setting up rules and organizational structure. The journey begins as one approaches a pathway that seemingly projects out from the residence to meet the user and lead them throughout the building (Figure 7.1). Rhythm and pace are considered
through widely-spaced steps that temporally elongate the approach of the front entrance and build anticipation. Like a musical crescendo, anticipation builds over time. A wall alongside the pathway guides the user forward and establishes frame by concealing elements subsequent in the experience from view. As one climbs higher, the user’s view frame is altered as the wall diminishes and the focus turns to a blank wall façade with a narrow vertical reveal. While the wall revokes the expectations of a traditional entryway, the reveal suggests opportunities that lie beyond the barrier (Unwin, 2010, p. 19–20). Like a film director, the architect has engineered suspense through creating anticipation (slow and arduous approach) and by withholding expectations of what lies ahead.

Approaching the entry reveal in suspense, the user is able to peer inside the entry vestibule. Upon crossing the threshold, one enters a courtyard entry space where pacing slows and the space acts as a transitional moment where anticipation meets uncertainty. The sheer height of the surrounding walls with no fenestration cut off views to the exterior and give the user a feeling that this spatial zone is isolated from the rest of the progression—an area where time seemingly stops. The user, at this point, is searching for release. Beyond the vestibule, a broad doorway acts as a frame to the climax: an elongated swimming pool (Figure 7.2). “The house frames you at its very center as you are spellbound by the perspective,” Unwin writes, “The perfectly level surface of the water the sky with the seep and dark green of the trees beyond—all set like a perfectly composed picture within the rectangle of the loggia, a subtly moving image projected onto a wall that is not there” (Unwin, 2010, p. 21). Following the climax, the experience offers resolution as the user enters the loggia between the courtyard and pool (Figure 7.3). At this point, the architect reveals that the only way to reach the pool is to descend two uncomfortably steep steps. In resolution, one becomes
“caught in the mind-world of the house. It insists you remain in its matrix as a spectator of the framed moving image of the pool and landscape outside” (Unwin, 2010, p. 21).

Throughout the spatial experience of the Neuendorf House, architects John Pawson and Claudio Silvestrin act as film directors as they engineer an emotional experience through anticipation, suspense, and uncertainty followed by resolution. The consideration of sequence and use of methods that manipulate expectations and perspective create a dynamic experience as a function of time. The building is not complete without the user to progress through the space it creates and experience the narrative over time.
Unlike traditional spatial narratives, exhibit experiences are constructed as an interpretation of a compilation of objects. Newhouse likens exhibit design to film cinematography. “The impact of the artist,” he argues, “depends on the team guided by the curator. Like film directors, exhibit designers are concerned with style, technology, and message” (Newhouse, 2005). The integration of spatial structure of the galleries within the organization of the entire building suggests that the impact of singular exhibit objects depends also on the collaboration between the architect and the curator.

In an attempt to elevate the narrative experience beyond the presentation of objects, Daniel Libeskind’s Jewish Museum in Berlin constructs an emotionally resonant progression through spatial metaphor. As an annex to the existing museum, Libeskind’s museum tells the story of centuries of Jewish social, political, and cultural history in Germany. Libeskind writes, “The task of building a Jewish Museum in Berlin demands more than a mere functional response to the program. Such a task in all its ethical depth requires the incorporation of the void of Berlin back into itself, in order to disclose how the past continues to affect the present and the reveal how a hopeful horizon can be opened through the aporias of time” (Schneider, 1999, p. 19). The sequences of the museum allow users to see Jewish history intertwined with the story of Berlin, as an integral part of German history.

Figure 8.0 | Single-frame parti, Jewish Museum
On one hand, the building parti—two linear structures that intersect to form voids is only evident in a static plan and remains rather inaccessible to the laymen (Figure 8.0). The real resonant experience comes from the manner in which forms deviate from our existing expectations of space, resulting in an austere spatial overtone. In response, users progress through a narrative of tension and suspense that even the casual visitor cannot deny. Schneider writes, “To understand the building, it is not necessary to retrace the long path from its complex intellectual origins and background to the built result. The building speaks a very clear language, through the physical and material lucidity of its volumes and spatial configurations, and thought the stance it takes with respect to its environment” (Schneider, 1999, p. 38).

The narrative exposition begins upon entering the museum at the existing main entrance, as the user encounters a colossal stairwell (the “Great Void”) (Figure 8.2) that descends into the subterranean levels, where the user enters a system of three intersecting axial hallways rich in conceptual meaning (Figure 8.2). The exposition establishes the overall tone and formal language to expect throughout the museum experience. The main corridor, termed the “Axis of Continuity” (Figure 8.3) leads to the exhibition levels. The frame becomes manipulated as floors slope upward while walls collapse and lines retreat from the eye to create a sense of forced perspective. The result is disorientation, suspense, and a loss of bearing—a theme that carries throughout the narrative.

Action continues to rise as the “Axis of Emigration” branches off the main corridor and leads to a viewing space to the Garden of Exile on the exterior—the only instance of connection to the realm outside of the museum.
Metaphorically, this communicates to the user that exile is the only path towards freedom. (www.jmberlin.de). The axis leads to the dark concrete void of the Holocaust Tower (Figure 8.4). The space is a physical and metaphorical dead end—grim and severe, with the only illumination provided through minimal daylight from a narrow aperture overhead. The atmospheric considerations emphasize the austere quality of the space—chilled air, confined volumes, and minimal illumination (Schneider, 1999, p. 50–51). This series of narrow spatial transitions as a sequential experience function as a successful narrative progression by establishing a visual exposition through form and materiality, adding suspense, and providing a physical vessel for the user’s state of mind to transition into the narrative of the galleries.

In the climax of the spatial promenade, six voids penetrate the building as vertical shafts illuminated only with natural daylight from above (Figure 8.5). Conceptually, the hollow penetrations of the six voids create a visual metaphor of the gap created between German and European culture and history through the devastation of the Jews. The absence of form pervades the experience of the museum, linking the exhibits from the upper most floor to the underground level where “the roots and fundamental aspects of Jewish culture and history will be spread out before the viewer as in an overture” (Schneider, 1999, p. 53). Metaphorically, the juxtaposition of the rectilinear forms of the voids onto the angular language of the Jewish Museum represents the relationship between Jewish history and the city’s history. The vicissitude and continuously changing nature of German history alludes to angular features, while the linear and straight lined elements of Jewish history intertwine with the building with various interruptions (Schneider, 1999, p. 57). These notions, best represented through static plans and diagrams, add complexity to the conceptual design of the museum but are easily overlooked by the uninformed user.
On the other hand, the experience to the mobile visitor at a human-scale remains as users realize that they can only obtain physical access to three of the voids—the remaining three only able to be experienced visually (Schneider, 1999, p. 50). The visual connection paired with the withholding of physical interaction is an act of suspense through formal relations, where expectations are put forth, left obscured, and then eventually revoked.

Upon reemergence into the outside realm, the experience resolves in an enclosed exterior courtyard with the Garden of Exile and Immigration (Figure 8.6). Composed as a matrix of volumetric pillars set at slight incline to an already uneven ground plan. Pacing slows and the user progresses through the negative space between the pillars with a narrow visual frame. Obstructed site lines evoke anxiety by withholding expectation and concealing what lurks around the corner. “The columns, which are perpendicular to the sloping paving do induce a feeling of dizziness, and make the surrounding buildings appear to totter. What will remain standing and what will fall seems uncertain, and there is no common level with the surroundings that could provide orientation and security” (Schneider, 1999, p. 51).

Overall, Daniel Libeskind’s Jewish Museum is a prime example of a successful narrative that considers the progression of the museum as a sequence to be revealed over time. Schneider writes, “Beyond all attempt to explain what makes this museum unique, people of all ages, walks of life, and cultural backgrounds appear to experience the drama and emotional force of this extraordinary spatial configuration immediately and instinctively” (Schneider, 1999, p. 58). The design parti of the museum was conceived as a static diagram that can only truly be experienced in plan and section to the stationary observer. However, the parti is largely responsible for the macro structural organization of the spaces and add a depth and richness to the museum as a building. In term of the mobile visitor and most essential to the success of the museum, on the other hand, lies the experiential qualities that Libeskind creates through manipulated forms and metaphorical relationships between body and space. The consideration of both static concept and the sequential perceptual-based experience at a human-scale creates an emotionally resonant experience that leaves users with a lasting impression of the story of Jewish culture as it is intertwines with the story of Berlin.
Il Danteum designed by Giuseppe Terragni in 1938, exists as an unbuilt memorial to poet Dante Alighieri that follows his narration of the *Commedia*. The architectural progression uses a series of spaces to depict the narrator’s journey through various aspects of heaven and hell and culminates with a view of ancient Roman ruins as resolution (Unwin, 2010, p. 121). As an exhibition style memorial with no functional spaces, the architect designed the space chiefly to communicate the narrative and guide users through an emotional three-dimensional experience of Dante’s poem.

The design of Il Danteum utilizes only the most rudimentary of architectural elements: wall, column, and plane and excludes the usage of traditional functional elements such as windows and doorways (Unwin, 2010, p. 122). In the static plan representation, the geometric proportions and organization of the plan is determined by the golden rectangle—an architectural move that establishes harmonious and well-proportioned spaces, but remains relatively undetected in the experiential promenade at human scale. The resonance of the building comes across to the user as they progress through the narrative to experience the dynamic changes in space and tone.

For the visitor arriving from the public realm, the entry acts as a transition between reality and the narrative. A compressed labyrinth entrance builds tension that is released as the space opens into a sunlit courtyard filled with light (Figure 9.0). The contrast between the unrefined natural world and the rigid geometry of the memorial elicits a feeling of anxiety and dislocation (Unwin, 2010, p. 124). Dante’s narrative begins as the visitor leaves the courtyard and approaches the covered area of the hall of a hundred columns—another metaphorical representation of “the dark woods” where Dante begins his poem (Figure 9.1). Through the field of columns, the visitor finds stairs leading to a raised platform and the gateway to Hell—the only traditional doorway found in the memorial. An
obstructed view frame leads the visitor into the Inferno timid and uncertain of what lies ahead. The Inferno reveals itself as a dark space with large columns placed according to the Golden Section (Unwin, 2010, p. 125). The rigid vertical nature of the columns make the room appear static and confined—as are souls trapped for eternity.

After the Inferno, suspense rises as the building challenges the visitor to find the escape from hell into purgatory. Expectations are defied as multiple stairways appear through identical perforations, where all but one meet a blank, dead-end wall. The last set of stairs, however, provides escape by guiding the user towards Purgatorio—a transitional space where sunlight infiltrates the ceiling plane through square openings (Unwin, 2010, p. 125). Metaphorically, the opening towards the sky represents the notion of heaven and elicits a sense of hope through its filtration of natural light from above. The user, at this point, the spatial narrative takes the visitor from the dark realms of hell and foreshadows the possibility of salvation.

From Purgatorio, the visitor exits through a corner reveal and follows yet another set of stairs towards the climax of the Paradisio—a space defined by its extensive use of glass. Unwin comments, “By reflection and refraction, the glass columns transform other people into shimmering spirits”. In this climactic experience, the visitors reflect upon their dark, suspenseful journeys and experience relief as the space opens up with light and tension is released through the ethereal reflections. After progressing through the Paradisio, meaning is established in the Impero at the uppermost level. In this area, the Imperial Eagle—a symbol of the greatness of the Roman Empire—resides as a resolution to the narrative. The user then returns through the Paradisio and exits the building through a semi-enclosed staircase with views towards ancient Roman ruins (Unwin, 2010, p. 125). The consciously framed views of ancient Roman symbols, along with their sequence within the structure of the narrative, acts as a political statement told from a perspective that heralds the power and prestige of the empire.
The successes of Il Danteum rely not on function, but rather on the project’s ability to guide visitors through an emotionally resonant spatial experience that inevitably alters their perception of the world outside the narrative. Unwin adds,

“Il Danteum would have been a place to follow a well-known story and to be prompted into feelings of trepidation, uncertainty, depression…perplexity, elevation…enlightenment, wonder, amusement…respect for the political authorities of the day…and finally escape back to the ordinary and everyday but with a transformed perception of the world” (Unwin, 2010, p. 126).

Mussolini intended the building to be a political statement—a monument to Italy and Fascism on top of its references to Dante’s literature. Like a film director or programmatic music composer, architect Giuseppe Terragni uses narrative to capture the interest of visitors and guide them through a sequence of experiences that communicate meaning beyond the superficial. Although the outbreak of World War II left the building unrealized, Il Danteum still exists on paper as a prime example of dynamic narrative architecture.
Design Implications

In conclusion, this thesis advocates that the architectural design process consider space as a vessel of human movement and interaction above an arrangement of forms determined by theoretical concepts represented through static methods to a stationary observer. Elaborate theories emphasize the static image in a medium where movement, sequence, and experiences that unfold through time are essential. Spatial experience depends on interaction with elements within one’s immediate view frame and the observer’s continuously reorienting perspective. All-inclusive diagrams and representations of a multi-dimensional space neglect opportunities to consider the perspective of the mobile user. Deleuze and Guattari argue, “One does not possess a bird’s eye view of coherent spatial grid or knowledge or dimensions and distances between points; rather, one orients one’s body relative to landmarks, aligning oneself to their implicit vectors. Thus, smooth space can only be explored by actions at close range, for example, ”by legwork”, by walking, hearing, and other haptic modalities” (Jormakka, 2002, 81). Environmental designers should, as consequence, conceive space in terms of the mobile user’s ever-shifting perspective—as dynamic series of images that reveal and conceal experiences as a function of time.

The explorations in this document support the notion that narrative concepts, when applied to space, create dynamic multi-faceted experiences that truly speak to the mobile visitor at a human scale through time-based narrative and the consideration of sequence, pace, metaphor, and perspective. However, upon conceiving space as a series of events, unity becomes the challenge. Why is, for example, a Corbusian promenade experienced as an architectural sequence rather than a collection of disconnected spatial modules? Proximity is not a proper justification of unity—overarching ideas and form languages must bridge the gap between the ethereal motion-based experience and the physical, static manifestations of space. While the bulk of this thesis focuses on kinetic experience, designers must not forego the basic principles of fixed, two-dimensional composition before applying principles of
motion to the process. The consequences in doing so, after all, risk a lack of unity amongst the dynamics of the experience. With this in mind, the creation of narrative spatial promenades calls for a marriage between well-constructed instances of static imagery and time-rooted sequence. The proper treatment of static design principles in combination with the consideration of sequential experiences makes for a dynamic, emotionally resonant spatial experience.

**Project Applications**

Through the study of the relationship between narrative and spatial experience, a divergent approach to the spatial design process arises. In terms of an actual project application, the designer must confront the project through different methods. The following text illustrates the divergence of approach between the creation of all-inclusive, theoretically rooted space versus sequential, phenomenological rooted experience to the mobile observer.

<table>
<thead>
<tr>
<th></th>
<th><strong>Fixed Observation</strong></th>
<th><strong>Sequential Experience</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-design</strong></td>
<td>Program requirements</td>
<td>Program requirements</td>
</tr>
<tr>
<td></td>
<td>Architectural theory</td>
<td>Architectural theory</td>
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<tr>
<td></td>
<td></td>
<td>Narrative theory</td>
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<tr>
<td><strong>Concept</strong></td>
<td>Spatial parti</td>
<td>Experiential script</td>
</tr>
<tr>
<td></td>
<td>(abstracted plan diagram)</td>
<td>(narrative timeline of user experience)</td>
</tr>
<tr>
<td><strong>Design Development</strong></td>
<td>Plan, section, axonometric drawing and/or model</td>
<td>Series of perspective views</td>
</tr>
<tr>
<td><strong>Presentation</strong></td>
<td>All-inclusive; presents various drawings as a singular instance in a static format</td>
<td>Reveals aspects of the design over time; animated walk-through or slide-based presentations that follow a narrative format (research/exposition, rising action sequences, climactic result, and resolution)</td>
</tr>
</tbody>
</table>

**Academic Implications**

The study of narrative applications in spatial design represents a greater idea in terms of an overarching design methodology that exhibits the ability for transdisciplinary considerations to positively impact the design process. With sequential and narrative design being merely one common methodology that links a diverse selection of disciplines within a greater creative landscape, endless opportunities exist to enrich the design process through transdisciplinary considerations. Such studies blur the boundaries between creative disciplines, allowing ideas to
cross-pollinate and generate unique inspiration and innovative solutions outside of a singular designer’s typical frame of reference. A cross-disciplinary understanding of design concepts allows students to gain a more profound, multi-faceted insight into overarching creative concepts while encouraging the recognition of connections between seemingly disparate entities. With the correlations between cinematic principles and spatial design principles, connections are formed that inevitably lead to a more significant and profound interpretation of the spatial design discipline. The building applications discussed exemplify the ability for theories tangential to design to interact with tectonic concepts to create evocative experiences as functions of space and time.

While not all disciplines share meaningful methodological correlations, the former exploration of concepts in sequence, narrative, and film as they relate to the spatial experience exhibits a definite parallel between the two seemingly disparate mediums. Experimental film director Sergei Eisenstein distinguishes between the two approaches to the spatial observer: “the cinematic, in which an immobile spectator follows an imaginary line among a series of objects using sight and mind and the architectural, in which the spectator ambulates through a series of phenomena visually observed in order” (Vidler, 1996, p. 23). With this in mind, however, it is important to note that such correlations do not translate directly—it is the mind of the designer that must be developed and trained to realize points of connection within the interlocking matrix of ideas. Psarra comments, “Although the reality of space separates architecture from [narrative], the mode in which they are experienced and certain tools of construction, concerning temporal sequence and the organizing framework of geometry, can be fundamentally similar (Psarra, 2009, p. 85)”.
WORKS CITED


WORKS NOT CITED


