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# The Effect of Cinematographic Architecture on Urban Space

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## THESIS PROPOSITION

The urban city gate denotes a defined point in which the person understands that a transition is occurring into a newly defined space. In addition, it marks the point in which a person enters a space, therefore controlling how a person initially perceives and interacts with the space. Because it defines entry and dictates initial movements the city gate has the potential to control movement and circulation within the space.

Its potential to control so many aspects of an urban space makes the city gate an important piece of armature which manages how the space is perceived and utilized. By creating a logical system of experiences the city gate dictates the views and the activities within the space in the same way that a cinematographer controls the experience of the audience in a film. Through its design, the architecture can begin to dictate a story board of choreographed moments tied into aspects of the site to tell the story of the urban space.

Unlike the director of a movie however, the architect must work in three dimensional space rather than two dimensional views. Furthermore, rather than having strict control of the camera's views to frame a story, the architect can only suggest a person's movement through the architecture. Therefore to implement an architectural system to coherently convey the story of an urban space, the architect must cinematic ideas in conglomeration with architectural principles. By using architecture to frame certain moments and suggest certain paths of movement through articulations in the design, a choreographed system of cinematic storyboards can govern the experience of the space. Therefore, the circulation through the space, while seemingly natural is actually strictly controlled by the architecture.

These ideas of cinematic architecture gate when utilized in a hierarchal network of city gates within an urban space can begin to create more complex storylines to bring order to a complex variety of experiences. It also perceptually breaks down a large urban space that is perceived as homogenous by creating sub-defined districts through a hierarchal network of regions with.

In the Las Vegas Strip, each building is designed to attract as much attention as possible in order to lure in gamblers and tourists. Each resort utilizes mega-scaled forms of signage or spectacle which creates a series of competing attention grabbing attractions

down the Strip. However, because of the extremely large scale of the buildings and the space, which is catered to automobile travel, the Strip becomes too large to be properly experienced by pedestrians as a promenade.

The proposal is to create a monorail system that circulates up and down the Strip to replace pedestrian circulation for which the Strip is ill suited to. It includes a regional transport center to act as an urban gate to the city of Las Vegas, as well as monorail stops to act as urban thresholds into the districts within the Strip. This new monorail system becomes the architectural infrastructure that presents the city of Las Vegas and the Strip to visiting tourists. This new transportation system would not only programmatically serve the needs of the casinos but also control how the different assets to the Strip are presented. The monorail stations would be located to define distinct districts of casinos that would serves to break down the scale at which the urban space is perceived. Each monorail station would become important public spaces that through its architecture would present the different casinos within each district *(fig. 9)*.

This new hierarchal network of urban thresholds would change the way visitors circulate and perceive the Las Vegas Strip. It would change the experience of the Las Vegas Strip from the overwhelming sensorial assault of competing spectacles, to an organized and rational storyboard of moments and events that would be easily and coherently understood by visitors.

## THESIS & ARCHITECTURAL ISSUES

Building a gate into an urban space creates an important piece of armature that has many architectural and social implications on the city and its inhabitants. The gate creates a marked point in space in which the person understands that a transition is occurring into a new space. It also becomes the initial point of interaction between a person and their new environment and therefore has a strong influence on how a person experiences and affects the urban space. In addition, when looking at the city in the long-scale of time, the city gate becomes a marker in time, giving information about the urban conditions of the city at the time of its design and construction. In both the short-scale and long-scale of time, the city gate is an important part of the urban condition.

The urban gate, in its most fundamental idea, is an entrance to a space. It is the threshold that marks a person's transition into a new space and also dictates the initial experience and perception of the new space. The implications of creating such an important moment gives the designer the potential to control movement and views within the space, therefore altering how the space is perceived and utilized. In very dramatic spaces, such as the Las Vegas Strip where the amount of sensory spectacle is overwhelming, the city gate not only acts as a threshold point into the Strip but can also provide an organized and logical system to experience all of its dramatic scenes. This allows the architect to take on a role of cinematographer by organizing and framing important moments in the architecture relating to assets of the site and implementing a system of transitional elements to create a coherent storyline of the site.

In order to create an understandable storyboard of experiences, numerous cinematic ideas can be utilized in the design of the space. One of the most successful mixes of architecture and cinematography occurs in Disneyland, where the design of the theme park was heavily influenced by the same cinematic principles Disney utilizes in animation (Chung, 272). In addition to ideas of cinematography and story-telling, architectural ideas of forced perspectives and framing visual attractions were used to control circulation through the park. These elements create a system of circulation which logically ties together formally unrelated regions into a cohesive and understandable experience *(fig. 1)*.

The most fundamental function of a city gate is to manage the flow of circulation. When dealing with the dynamic flowing of objects, it is important to understand how movement occurs ecologically in nature through a spatial corridor. In nature there are sources, conduits and sinks (Cha, 328). A source is an area where output exceeds input. This is where the flow of the objects begins (Cha, 328). Objects, then travel through the conduit, which is as the spatial corridor along which the objects move (Cha, 328). The process concludes in the sink, an area where input exceeds output (Cha, 328). These simple ideas of dynamics can be translated architecturally to govern the flow of people. The source becomes the staging area before movement, a place where people gather before they begin circulation. The conduit becomes the prescribed method and path of transportation through the space. The sink acts as an attraction exists to draw people in, creating a space for gathering. This process can occur in a cyclical manner, in which a person begins at a source, travels along the conduit and arrives at the sink, which then becomes the source for the next conduit. By utilizing these principles, and clearly articulating the each of these functions, it brings further order to how people circulate among a space.

These principles of cinematography, architecture and dynamics can be combined to design a hierarchal system of thresholds that directs the experience of the space. This network of thresholds occurs at diminishing scales in order to define districts within a larger region. Each subsequent threshold along the path of travel would signify a smaller district within the urban space defined by the previous marker. This idea of hierarchal thresholds can be seen in already implemented transportation infrastructure networks in other cities *(fig.2,11)*. This process subdivides how large urban regions are perceived and allows a person to more clearly understand his place within a larger urban context.

This city gate inherently deals with ideas of movement and transition and therefore the spaces and forms must be instilled with aspects of motion in order to convey the function of the building as an organizer of movement. There are numerous architectural precedents which have forms and spaces that are visually and experientially very dynamic ranging from gothic churches to modern train terminals and airports *(fig. 2, 12))*. These buildings seem to have certain shared architectural principles which create their dramatic visual and emotional effects. When looking at these buildings, it seems as

if their forms are derived from the articulation of forces, as if their forms were created by influences of motion. They are also very linear. The ideal for a Gothic Church, which manifests itself in Santiago Calatrava's BCE Center in Toronto, is a linear articulation of the gravitational forces on minimal structure (Calatrava). Furthermore the articulation of the forms in the building is very linear. The linearity of these buildings as well as their lighting effects suggests directionality upwards and therefore movement upwards. This linear directionality creates vanishing points creating perspectives and the suggestion of movement within these spaces towards an articulated end point. By utilizing these principles, the architect can control how a person's eye moves within a space and suggest a circulation towards an intended endpoint. In this way the articulations of the forms and spaces can control how the architecture is utilized and experienced.

When looking at cities in the long-term scale of time, they become dynamic entities. As a city grows and changes, new districts are created and the use of existing districts may change. Over time, the way these urban markers are utilized may also change or even become obsolete. Because the city gate is an important piece of armature as time passes and the context around it changes, these gates become markers in time which can convey information about the architectural and urban context contemporary to the time of its construction. When designing in an area which changes as frequently as the Las Vegas Strip, it is important to consider what role a piece of armature such as an urban gate play in the context of the city in the long-term scale of time.

***figure 1.*** Storyboard of the Entrance to Disneyland

***figure 2.*** Examples of dynamic architecture. (top left, clockwise) TWA Terminal, Amiens Cathedral, BCE Place, Bilbao Airport

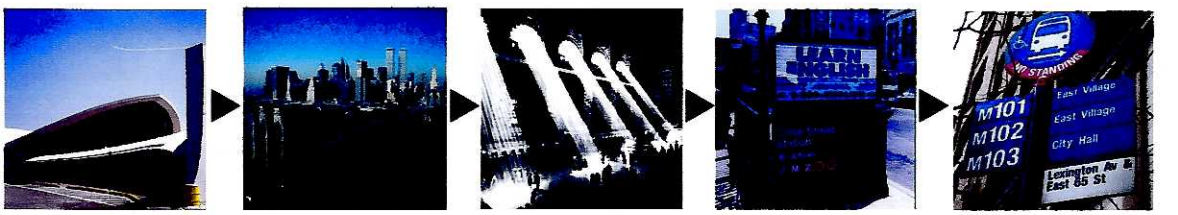


***figure 3.*** New York City transportation infrastructure markers.

## SITE SELECTION & ANALYSIS

The city of Las Vegas has experienced very rapid growth through out its history fueled most recently by gambling and tourism. In a little over 100 years Las Vegas has gone from an uninhabited spot in the desert to a burgeoning city of half-a-million inhabitants (Land, 5). Most of its growth has been over the past two decades, doubling in population from 1980 to 1990 and then quadrupling from 1990 to 2000 (Land, 5). Today it is the fastest growing city in the United States (Land, 5). This rapid growth coupled with the seemingly endless availability of land in the desert has caused Las Vegas to become a city of homogenous sprawl *(fig. 4)*. The only discernable district is the Strip, because of the inflated scale of the buildings and its unique function as the main gaming and tourism district. However, because of its rapid development as well as the large scale of its buildings and the almost uniform distribution of each casino's common program, the Strip suffers from the same problem of homogenous sprawl as the city of Las Vegas. To alleviate this problem a hierarchal system of thresholds can be installed to bring order to how the city and its different districts are understood.

The Strip and the rest of Las Vegas have developed on parallel paths, their growth fueled by the same factors. Even in its earliest days, before it was officially a city, the idea of being a marker in travel was inherent to the development of Las Vegas. Due to its location in the desert halfway between Salt Lake City and Los Angeles, the Las Vegas valley was settled as a Mormon Colony commissioned by Brigham Young to serve as a stopover and oasis in the desert for travelers (Land, 18). The city of Las Vegas was founded in the 1900s a railroad stopover for a line running between Salt Lake City and Los Angeles (Land, 20). The initial city of Las Vegas was built along a grid oriented towards the railroad tracks with the railroad station at its head *(fig. 5a)*. The railroad station became the threshold into the town, and the early developments of the city were built around it. This Freemont Street district near the train station held the bars and gambling saloons to serve travelers during the stopover. At present however, because of changes in the functions of the city, the district around the old train station is secondary in importance to the Las Vegas Strip. Today it is rarely used. Now the old train station, which used to be the main threshold and districts of the city are now simply markers of the time when Las Vegas was dependent on the railroad.

In the 1950s the railroad closed its stopover in Las Vegas, but by this time a new means of transport provided the capital necessary to continue the city's growth (Land, 53). The Interstate Highway Act of 1956 built a network of wide high-speed roads throughout the country, making the automobile the preferred means of regional transport (Moehring, 37). Now the automobile and the highway, not the train and the station, were the means by which people arrived in Las Vegas. The city grew and adapted accordingly, the main gambling district moved from the train station toward the highway into what is now known as "the Las Vegas Strip" *(fig. 5b)*. In addition to the highway, a system of suburban roads established the grid pattern oriented to the highway began to extend from the main transportation spine of the highway, facilitating the development of the area west of the Strip and south of the train station and Freemont Street district (Moehring, 68) *(fig. 5c)*. Las Vegas is now quickly reaching a point, because of its size and the rapidness of its sprawling growth; it simply takes too long to take local roads from the end of town into the downtown area and the Strip. To counter this, a new highway is under construction that would create a ring around the city, making it faster to get from one end of the city to the other and facilitating further expansion and sprawl out into the desert (Moehring, 99). At the edge of this highway, in contrast to the sprawling grid that Las Vegas had previously grown on, large self-sufficient developments of entirely planned communities such as Summerlin are being constructed to create suburban districts at the edge of the existing conditions *(fig. 5d)*. The result of such rapid and homogenous growth is that the city has become too big to comprehend and navigate easily and efficiently. By creating a hierarchy of thresholds into smaller defined districts of Las Vegas, the city can be conceptually broken down into smaller chunks that can be more easily understood.

Las Vegas Blvd. more commonly referred to as the Strip, established itself as the primary casino district when the automobile became the primary means of interstate travel (Moehring, 37). Today it has become a 6-mile automobile promenade of mega-resorts and casinos. Each resort is designed to draw gamblers and tourists into the casinos through huge events occurring in front of the building, massive signage or by making the building itself a huge billboard *(fig. 6)*. The Las Vegas Strip has become a dense district of spectacles which, combined with the fact that almost everyone there is on vacation, creates a palpable and intoxicating atmosphere of excitement and energy.

However, because the Strip grew up catering to the automobile, the size of the casinos and the distance between them has become too big to be properly experienced at the pace and scale of the pedestrian. The massive scale of the buildings combined with the repetitive distribution of program within each casino has given the Strip a homogenous and overwhelming feel to pedestrians. Currently pedestrians are funneled from casino to casino through a network of people movers, escalators and monorails *(fig. 7)*, which almost completely deny people views of the spectacles that occur on the Strip *(fig.8)* (Koolhaas, 600). A new monorail system running down the middle of the Strip would replace the pedestrian method of transportation and therefore would allow visitors without automobiles to experience the Strip as a promenade. The energetic atmosphere of the tourists walking up and down the Strip would be transferred to the monorail system, making the monorail an exciting social event and its stations important urban gathering places. The placement of these monorail stations defines districts within the Strip and creates regions of resort-casinos. Furthermore the architecture will respond to the conditions of each site in order to present and frame each district's distinct character as well as create a system of how each spectacle of the district is presented *(fig.9)*. The design of these stations becomes important in organizing the storyboard of spectacles in Las Vegas.

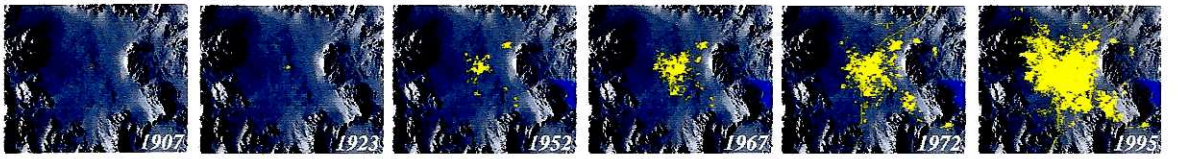


***figure 4.*** The Rapid Growth of the City of Las Vegas

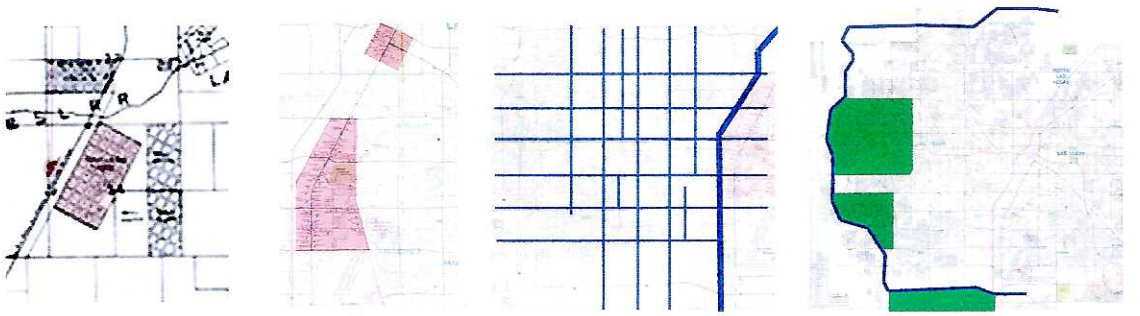

***figure 5.*** **(a)** Las Vegas 1900, early city oriented towards train station. **(b)** Freemont Street and the Las Vegas Strip. **(c)** The growth of the sprawling grid into the city. **(d)** Suburban developments and new intra-city highway


***figure 6.*** The spectacles of the Las Vegas Strip

***figure 7.*** Existing pedestrian circulation

***figure 8.*** Views through pedestrian circulation

## PROGRAM SELECTION & ANALYSIS

- **Regional Transportation Center** – A new transportation hub located at the southern end of the Strip, south of the Mandalay Bay, will connect different forms of transportation to the Strip as well as to the rest of Las Vegas
    - **Function 1:** Threshold for all incoming forms of transport.
        - **High speed rail terminal**
        - **Monorail connection from airport**
        - **Regional bus terminal**
        - **Parking lot**
    - **Function 2:** Dispersal point for transportation through out Las Vegas.
        - **Intercity Transit Network.** A major hub connecting the Strip and the airport to Las Vegas's other districts.
        - **Exotic car rental.** Allows tourists to experience the Strip as an automobile promenade.
        - **Main monorail station for the Strip.** Staging point for tourists waiting to ride the monorail and proceed down the Las Vegas Strip.
            - **Museum.** Gives waiting visitors an introduction to the city and the story of Las Vegas. Provides background information for the upcoming Las Vegas experience.
            - **Tourist Travel Services.** Enables tourists to book hotels as well as other recreational excursions throughout Clark County, such as helicopter tours, skydiving, tours to Hoover Dam, etc. This station will also become the staging area for these excursions.

- **Monorail Terminals along the Strip.** New monorail stations located at intersections along the Strip begin to break up its massive scale and define districts. They will also serve as public spaces that will present and frame the different spectacles located in each district. This system of stations will become important gathering places and will allow for each resort-casino to develop parts of the space by adding restaurants or shops. The monorail stops will become a fabric, which ties together the casinos into a cohesive district.

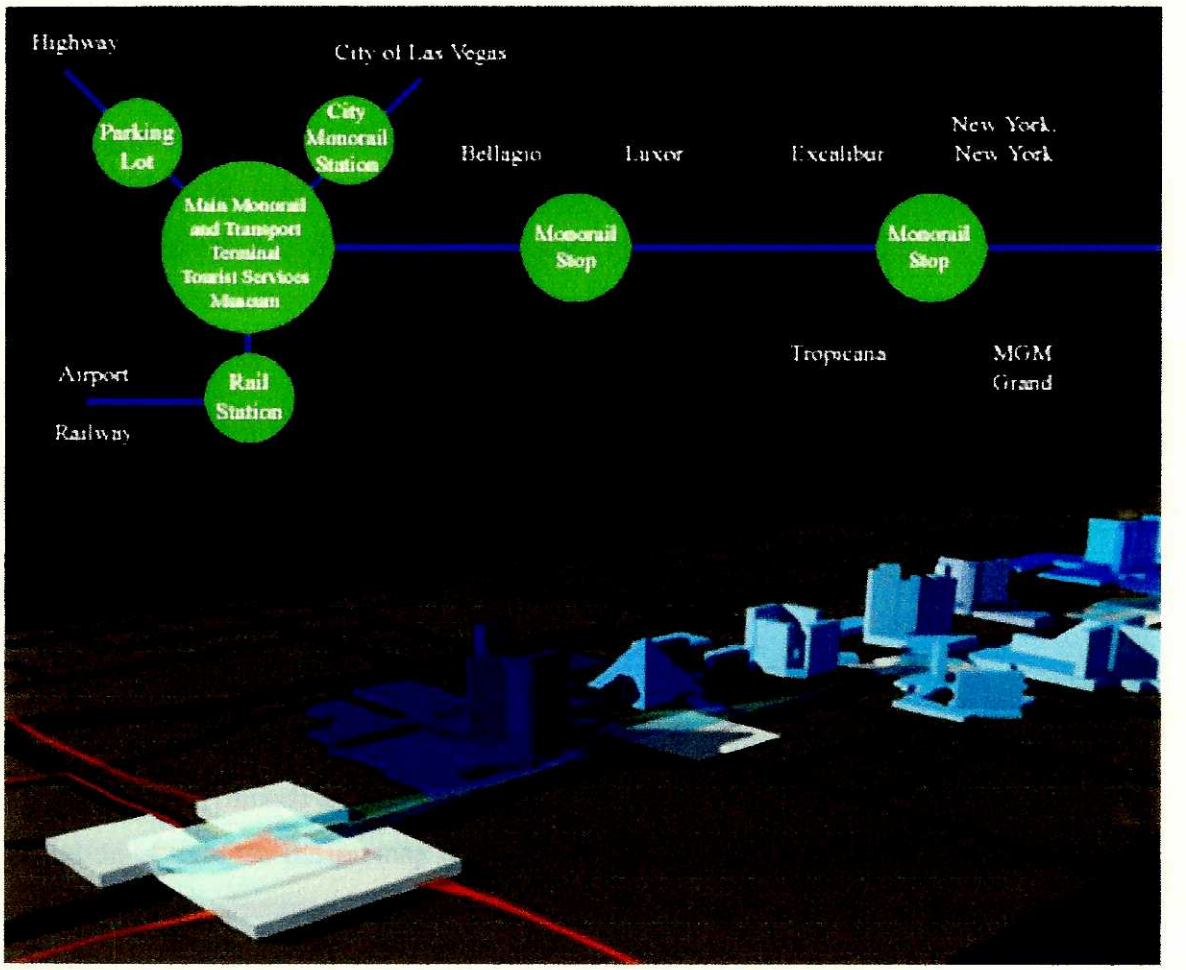


***figure 9.*** Proposed intervention

## PRECEDENTS & ANALYSIS

**The Uffizi.** Designed by Giorgio Vasari this urban entrance corridor acts as a threshold marking the transition from the Arno River into the Piazza Signoria (Fei). Through specifically designed view corridors occurring along the promenade, three of the most important buildings in Florence become visible: the Palazzo Signoria the seat of the government, Ore San Michele the center for mercantile exchange, and the Duomo, the seat of the church *(fig. 10)*. This entrance is very successful in controlling how a visitor to Florence first encounters and perceives the city.

**Renaissance Gates of Florence.** After this ring of defensive walls was brought down, the city gates were left standing. As the city grew outside the border defined by the old defensive wall, the space around these city gates was converted into piazzas. This system of piazzas and relics of the old city gates serves as historical markers of the time when these gates defined the entry points and boundaries of Renaissance Florence.

**City Transportation Network.** By looking at cities with an existing and developed transportation network such as New York City or Boston, the hierarchal network of transportation and thresholds can be examined to see what types of transport are used and how they incorporate thresholds to define the entrances to the city and the districts within *(fig. 11)*.

**Evolution of Transportation Terminals.** In looking at contemporary train stations and transportation terminals and comparing them with early versions of train terminals, the evolution of terminal design may reveal how the forms of these buildings have changed based on the programmatic changes dictated by the evolution of transportation. The archetype of the train station has evolved from the initial articulations of two separate pieces, one housing the train station services, often designed with classical ornamentation, and an engineering shed, which covered the tracks and trains (Webb, 34). The newer stations however are no longer singular endpoints in a person's travel, but are

now thresholds that mediate between different scales of travel and types of transportation (Webb, 68).

**Dynamic Architecture.** There are certain architectural forms and spaces which convey to observers the idea of movement *(fig. 12,2)*. This type of architecture creates an emotional connection with a person that creates feelings of excitement and ideas of speed and motion associated with travel. **High-Gothic Cathedrals** are early examples of this type of dynamic architecture. The striated vertical articulation of the collonets creates vertical lines, which combined with the light effects of the clerestory windows make the space and the eye of the observers soar vertically. Some buildings express their dynamic nature formally such as Saarinen's **TWA Terminal.** The process of Saarinen's design was to articulate in the architecture the paths of motion of incoming passengers. The resulting curvilinear forms create dramatic spaces which were designed to facilitate the natural path of circulation through the space (Saarinen). Visually the forms seem to articulate dynamic forces acting upon the building. This perceived storage of potential energy adds a sense of tension, which heightens the dynamic sensation of the architecture. In Calatrava's **Bilboa Airport** and in his **Orient Station** in Lisbon, he takes an almost Gothic approach to the design by articulating structure. Calatrava manipulates the structure to create seemingly dynamic forms to express the ideas of motion and excitement related to travel. The linear structural elements spring from an articulated point, giving directionality to the space.

**Disneyland.** Disneyland utilized a series of design principles developed from animation to drive the design of the architecture and urban spaces of the park. The first, **cinematography,** creates a storyboard to sequence how a person would begin to interact with the various districts of the park (Chung, 276). From the time a visitor arrives at Disneyland, his moves are carefully planned and choreographed by the design of the park so that he experiences the attractions as a sequence of events unfolding in an organized narrative (Chung, 276). **Scale manipulation** is used to enhance the feeling that the visitor has entered place that is different from what is outside the park. "Like Alice stepping through the looking glass, to step through to Disneyland will be like entering another

world." (Chung, 276). The design of the park creates **framed perspectives,** which frames intended panoramic views of the park (Chung, 276). The last principle was what the designers referred to as the **"Weenie".** The Weenie is a large attraction framed by a perspective that acts as an attraction to draw people through the space towards the circulation sink (Chung, 276). The major weenie is Cinderalla's Castle, which draws people through the entrance, down the promenade of Main Street, U.S.A. and then radiates out into the different districts of Disneyland (Chung, 276). The castle also acts as a point of reference and orientation within the park (Chung, 276). Using these principles, the designers were able to control how people naturally moved through the park and create a coherent system of circulation, which was as clear as possible to visitors experiencing the park for the first time.

**Rollercoaster.** One of the most important aspects of riding a good rollercoaster is the anticipation that builds before actually going on the ride. The process begins by waiting on a long line, which winds its way around the rollercoaster, where you begin to slowly ascend upwards toward the ride. The sense of excited anticipation is heightened by the sound of the wind rushing past the coaster and the screams of people riding. Once you step into the cart and are strapped in, the coaster begins a slow rise upwards, and the excitement builds exponentially as you ascend upward away from the ground. This process of anticipation crescendos at the top, at which point the cart almost stops and giving the riders a panoramic view of the entire park before the cart tips downward and drops down the track. This choreographed process builds tension, anticipation and excitement before the ride even begins.

***figure 10.*** Uffizi


***figure 11.*** Transportation Network of New York

***figure 12.*** Dynamic Architecture

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