The Space Between Real and Reel

Unravelling the Dynamic Interplay of Cinematic Architecture and the Real Built
Environment of the Western World in the 20th Century

Eline de Groot / 5300029

Content

Abstract

This thesis investigates how the real Western built environment influenced cinematic architecture in the science-fiction films *Metropolis* (1927) and *Blade Runner* (1982), revealing the real architectural elements that were either copied or adapted into imaginary worlds throughout the 20th century. In doing so, both films are analysed on three different scales: cityscape, building and detail, and are connected to changes, events and movements of the 20th century. *Metropolis* shows an exaggeration of New York City, and displays in this cityscape complex issues like urbanization and industrialization. Moreover, the influence of modernism is visible through the use of Le Corbusier's Radiant City as a backbone, and concrete and steel as building materials. In *Blade Runner*, the cityscape portrays a city of post-industrial decay, chaos, and overpopulation, and can be seen as the opposite of the Radiant City. Furthermore, Asian neon signs, shops and culture shows a shift to a more Eastern dominance. The details of certain spaces, however, show a connection to postmodernism and its characteristic of using ancient styles as a reference for architecture. As notable, both films display cities of the future, however, the films are rather intertwined with the realities of the 20th century.

Introduction

"History is hysterical: it is constituted only if we consider it, only if we look at it - and in order to look at it we must be excluded from it."

(Barthes, 1981, p. 65)

Figure 2: General view - Downtown Manhattan. (The New York Public Library, 1922).

In 1924, the Austrian filmmaker Fritz Lang arrived by boat in New York City. He saw the skyline of Manhattan and was amazed by the size of the skyscrapers, which was nothing like the architecture in Europe that he was so familiar with. At that time, he was working on ideas for his new film *Metropolis* (1927). This particular view impacted Lang's perception of a city, and his intention for this new film. He was both fascinated and fearful of the city, as he realized that there was both a light and dark side to it. Exactly this thought is highlighted in one of the first science-fiction films *Metropolis* (Bachmann, 2002). This anecdote about Fritz Lang's inspiration for *Metropolis* shows the influence of the real built environment on the visual worlds in science-fiction films.

In *Metropolis*, Lang reflects on the unforeseen social, cultural and technological changes in the Western world after World War I. It focuses on themes of industrialization, urbanization, and socio-political disorder (Graham, 2016).

Similarly, *Blade Runner* (1982), directed by Ridley Scott, mirrors the changes of the Western world near the end of the 20th century. It was a period of technology developments, population growth, and environmental issues. Set in the future of 2019, *Blade Runner* takes place in a combination of the cities New York City and Los Angeles (Rowley, 2006).

Not only the societal changes influenced the making of *Metropolis* and *Blade Runner*: architectural movements like modernism and postmodernism had a considerable impact on cinematic architecture as well. In both films, the architectural designs of the future were shaped by the societal and architectural changes in the 20th century in the Western worlds.

This thesis crosses the boundaries between what is real and what is (science)-fiction, and it examines architectural inspirations and realisations within the social, cultural, technical and socio-political context. By applying *Metropolis* and *Blade Runner* as case studies, this research untangles the visible and invisible connections between cinematic and architectural landscapes in the Western world in the 20th century. The research question of this thesis is:

How did the real Western built environment influence cinematic architecture in the science-fiction films Metropolis *(1927) and* Blade Runner *(1982), revealing the real architectural elements that were either copied or adapted into imaginary worlds throughout the 20th century?*

This thesis will therefore examine specific copied and adapted architectural elements that were taken from the real built environment into the imaginary worlds of science-fiction films.

Literature review

Metropolis and *Blade Runner* were both selected as case studies for this thesis. *Metropolis* was created after the horrors of World War I, and it reflects this by depicting a future of intense industrialisation and urbanisation. Similarly, *Blade Runner* emerged during the Cold War, and the film responded to this situation through portraying the fear for nuclear threats and environmental pollution. Both films hold up a mirror in front of their viewers, which confronts them with their own fears and anxieties about the future. This characteristic makes *Metropolis* and *Blade Runner* fit well into this thesis as case studies for examining the influence of the real built environment on cinematic architecture.

This thesis builds upon the already existing literature on this topic by unravelling underlying social, political and cultural themes enclosed within the architecture of *Metropolis* and *Blade Runner*. It helps in creating an understanding of how real architectural elements were used to comment on the issues and anxieties of the 20th century. The purpose of this thesis is therefore to also show the role of importance that architecture plays in creating an imaginary world and how architecture can be a visual representation of criticism of certain contemporary events and developments. By zooming in on specific copied and adapted architectural elements into the cinematic landscapes of *Metropolis* and *Blade Runner*, this thesis provides new insights on the topic.

To reach these ambitions, and for this thesis to be effective, extensive research has been done. The relationship between architecture in the real world and cinematic architecture has received significant scholarly attention,

especially in the science-fiction genre. *Metropolis* and *Blade Runner* are both films that interested scholars to write about due to their historical relevance and importance, and therefore there is a considerable amount of literature findable on this topic. For example, Graham (2016) offers an insightful analysis into the relation between verticality of real architecture and imaginary architecture in science-fiction films. He also discusses the differences between how real cities versus science-fiction cities are being constructed, lived and experienced. Rowley (2006) talks about analogous theories and connects them to the context of the 20th century. The topics and arguments that these authors address serve this thesis: the context and architectural elements can be extracted from these writings, and used in this research. For *Metropolis* specifically, Bachmann's book (2002) was relevant, since it analysed not only the film itself, but also the process of making the film and Lang's visit to New York City. In *Blade Runner*'s case, Cruz (2014) gave multiple insights that were used, and expanded upon.

In general, scholars agree that *Metropolis*' architecture was influenced by modernist ideas which were either built or were never executed. This is in contradiction with *Blade Runner*: it was created in the transitional period between modernism and postmodernism. Therefore, some voices argue that the film aligns with modernist ideas, while others argue that the film should be classified as a post-modern production. For example, contrary to Bruno's (1987) statement that Blade Runner shows postmodern elements, Rowley (2006) argues that it is neither a modernist nor a postmodernist visualization, but it rather presents a modernist perspective on what to avoid.

Methodology
A literature review of mainly scientific articles is applied in order to answer the research question of this history thesis. This way, the thesis discusses what is known based on literature, and it can provide new insights and perspectives. The resources for this thesis contain a selection of literature and two case studies, as well as a viewing of both films. By doing so, the thesis provides examples in the form of case studies to validate the points made based on literature and the viewings.

The cinematic architectural expressions in these two films are placed in the social, cultural, technical and socio political context of the time they were produced. Moreover, they are linked to the architectural styles and movements in the 20th century. As such, the architectural elements in science-fiction films are identified and assessed on how real architecture shaped these elements. Looking in-depth into these two films and connecting them to architecture in reality is therefore beneficial to demonstrate how cinematographic elements were influenced by different architecture styles over time in Western society in the 20th century.

Looking more closely, this thesis uncovers the copied and adapted architectural elements in both films. This is done by using a structure for analysing these elements. In architecture, the different scales - cityscape, building and detail - play a role of importance, and are therefore selected as the focus point of this thesis. A summary of this structure is displayed below.

Table 1: The structural analysis on different scales.

The structure of the analysis of cinematic architecture in *Metropolis* and *Blade Runner*		
Cityscape	Building	Detail

Thesis structure
This thesis consists of four chapters. The first chapter 'The Beginning Of...' talks about the general information that is necessary to understand the context, the architecture and the two films itself. The following chapter dives into the film *Metropolis*, starting with a short introduction on the film. The context and architecture of the time period is discussed after, and the chapter describes the copied and adapted elements of real architecture that were used in the film. In the third section of this thesis, the same structure is applied to the film *Blade Runner*. The fourth chapter consists of a conclusion that discusses the results of this research.

Chapter 1: The Beginning Of...

"Architecture is not the product of materials and purposes – nor by the way of social conditions – but of the changing spirits of changing ages."
(Miller, 2006, p. 22)

Figure 3: The demolition of Pruitt-Igoe in 1972 (TheGuardian, 2020).

In the first section of this chapter, *the context, architectural movements and the development in film* in the early 1900s is discussed, which sests the scene for *Metropolis* (1927). In the second section of this chapter, the same approach is applied for the second half of the 20th century, which sets the scene for *Blade Runner* (1982).

Setting the scene for *Metropolis* (1927)

The context

When looking into the architecture of the 20th century, one has to also take the past into account, since new ideas and works are either a reaction or counter-reaction on reality. One development from the 18th century onwards that has had a considerable impact on architecture in the 20th century, is industrialisation. In theory, industrialisation consists of four stages, starting with the steam engine in 1763 by James Watt and the making of high quality steel. As a result of these two developments, factories emerged as bastions of mass production (Menga, 2022).

The Second Industrial Revolution (1840-1914) marks a period in which electrical energy and fuel resources were being used to invent car engines, trams, elevators, escalators, trams and telephones. Moreover, streets, parks and squares could now be safely lit with electrical street lights. Because of the fact that day and night could now be altered, 'night life' started to emerge (Michale, 2015). New ways of building emerged as well during this period: the innovation of steel construction made it possible to build multi-storey buildings. However, in Europe, relatively less skyscrapers were built in that time period. A new building material arose, nonetheless: reinforced concrete. This material was more flexible than the steel frame, which allowed architects to design open, unsupported spaces (Sutton, 2000).

As an outcome of the increased progress of industries, capitalism became to play a role of importance in cities. The worldwide population grew rapidly and out of hand, and people moved from rural areas to the cities where they worked in factories. Thus, cities were in constant motion, destruction and reconstruction. The city walls that were once seen as protective barriers became viewed as an interruption of the flows of traffic and economic growth. Urban planners and designers tried to organize

the chaos, however, inhabitants often experienced surprise and disorientation, due to permanent change in city life (Fritzsche, 2015).

The growth in technology took its toll: the working and living conditions of the employees were poor and unhealthy. Nature started to be destructed because of environmental pollution caused by the new factories. Colonial lands also became a subject of industrialisation, due to the search and need for raw materials for production. This resulted in competitiveness and conflict among industrializing countries, which can be seen as a cause – among other aspects – of the First World War (Menga, 2022).

Architectural movements

The years after the First World War were central to the new and revolutionary ideas of the modern movement. The horrors of 1914-1918 had left its mark on society, and therefore on its architects as well. Some could not let go of the events that happened, whereas others had their vision on the future, and thought of it as an opportunity to change the world for the better (Sutton, 2000). Walter Gropius, Ludwig Mies van der Rohe and Le Corbusier shared this opportunistic state of mind and brought modernism to life by practicing it from the early 1900s onwards. The movement broke free from traditional architecture, and focused on logic and simplicity. Modernists did and do not believe in ornamentation, but in functionality and minimalism (Punter, 1988). Only after the Second World War the movement became more influential (Rowe, 2011). In that period, needs were changing and the population was increasing, so other forms of architecture were required. This was also made possible by the mass production of the new materials iron, steel, glass and reinforced concrete. Thus, constructions became more simple, flexible, fast to build, and less expensive (Menga, 2022). An often referenced example of modernist architecture is *Villa Savoye* (1928-31) by Le Corbusier, which is visible in figure 4. Its design is based on Le Corbusier's Five Points of Architecture, which are explained in Table 2.
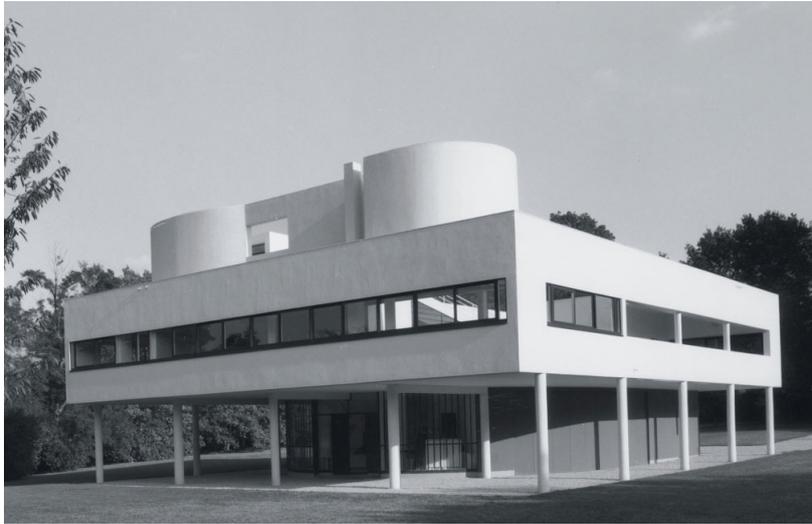
Figure 4: Villa Savoye by Le Corbusier, in which the Five Points of Architecture are visible (Photograph of Villa Savoye, n.d.).

Table 2: Le Corbusier's Five Points of Architecture and an explanation (Moreira, 2023).

Le Corbusier's Points	Explanation
Pilotis	Lifting a building on pilots off the ground for circulation
Free design of the ground plan	An open plan to make the ground floor more flexible and integrated
Free design of the facade	By separating the construction for the facade, more freedom is created for windows and openings
Horizontal windows	Horizontal windows provide a panoramic view and more indoor lightning
Roof garden	Roof gardens add extra living space

During the rise of modernism, an art movement called *avant-garde* (a military metaphor, meaning 'advance guard') started to grow. Its style was unusual, controversial, and acted against cultural order. After the First World War, there was a need to find a new language that would create a more real and authentic vision of reality (Mambrol, 2020).

The developments in film

During the Second Industrial Revolution, cinema emerged as the result of new, technical innovations and a new desire to record time to analyse and synthesise motion (Andersen, 1975). The beginning of cinema comes back to techniques to make images move, which were invented in the early 1900s, and were called the *Phenakistiscope* and the *Zoetrope*. These devices consisted of a series of images portraying several steps of an uncomplicated motion (e.g. people walking, birds flying). In fact, the human vision and the way it is processed by the mind connect the sequence of image to become one flowing, uninterrupted movement. This is illustrated in figure 5 and 6. Several inventors merged these devices with projection on a screen, so that multiple viewers could see it at the same time. However, the length of the images shown were limited, until a new invention was introduced that would be the base for movies as we know them now. In this new method, individual images were placed on a lengthy, flexible strip that was wound up on a reel. Later on, the strip became translucent, and was named 'film' (Gunning, 2015).

Since the beginning, film and science-fiction have been linked to one another. By definition, science-fiction is a genre of speculative fiction about the future, in which space or time travel and life on other planets is portrayed, as well as advanced technologies and major social and environmental changes. In early and short films of less than two minutes, techniques of fast-forward and reverse-motion were used that are now viewed as the earliest elements of science-fiction films. The focus was on a spectacle, and not on characters, since there was a restriction of time. The film *Trip to the Moon* (1902) by George Méliès is an example of this: it shows a blend of the magical special effects achievable during that era. In a way, the early and later science-fiction films make special effects into a character in itself, rather than using it for the sake of the genre (Mousoutzanis, 2013).

The science-fiction genre tended to be used by European filmmakers to create an alternate moving reality besides the existing reality. Because the future is insecure and leaves people insecure, watching films on the future could offer a sense of control, especially if it was a frightening future. Using this notion, filmmakers like Fritz Lang predicted the future based on the present and commented on the social situation of the 1920s. His film *Metropolis* (1927) is one of the first science-fiction films, set in a dystopian city of the future. Lang reflected critically on the changing world around him, displaying the lower class underground the city and the upper class highly above in the skyscrapers. Unlike *Trip to the Moon* (1902), the movie was originally three hours long and showed character development of the main characters. The black and white silent film was not only distributed in Germany (the place where it was filmed), but also the UK, the US and even Australia (Milner, 2004).

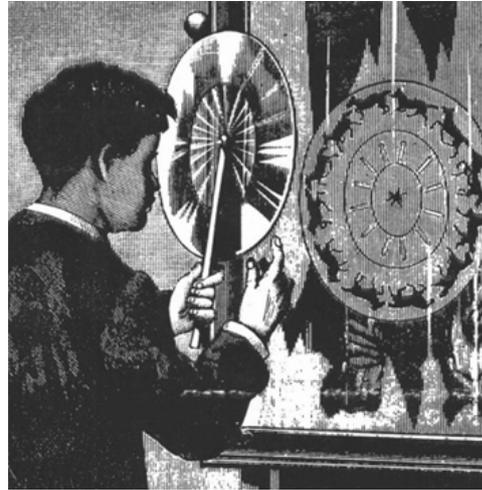Figure 5: A Phenakistiscope of a dancing couple (Image of a Phenakistiscope, n.d.).

Figure 6: A Phenakistiscope and how it works (Image of a Phenakistiscope and how it was used, n.d.).

Setting the scene for *Blade Runner* (1982)

The context
Like the First World War, the Second World War left a scar on individuals and society. Cities were left bombed, which had to be rebuilt, and the same could be said about the lives of its citizens. After the Second World War, society and daily life started to change. With the Baby boom, overpopulation became a relevant topic. New forms of technology were invented, and the field grew exponentially. Globalisation made it possible to communicate with other people, companies and governments over the world more easily. Protests against racism and the inequality of gender made a difference (Massey, 2015).

However, the tide did not completely turn: the period of war was not completely over. A less traditional war was fought between Western countries (the U.S. and its allies) and the Soviet Union, called the Cold War. The ideologies and political systems of the nations – capitalism (the West) and communism (the East) – collided. It caused intense tension spread out over a long time. The U.S. feared nuclear attacks from the Soviet Union and the start of a Third World War (BBC Newsround, 2019).

Architectural movements
The start of change was the reconstruction of cities after the Second World War. The need for housing and basic needs was bigger than ever. To facilitate this as fast as possible, budgets were kept low and the architecture was kept simple. During this time, modernistic ways of building were applied often, and soon one rectangular building block was built after another (Tyrnauer, 2016).

This way of reconstruction helped people finding housing and rebuilding their lives, however, there was also critique on this method from citizens as well as planners. To illustrate this, the following story about the project of Pruitt-Igoe is stated below, which explains the difference between modernism and postmodernism.

Pruitt-Igoe and the death of modernism
One of the most eminent urban planners during the 20th century in The United States was the well-networked Robert Moses. He designed the public housing project called Pruitt-Igoe in St. Louis, Missouri in the late 1940s. Moses' ideals, ideas and sketches for the project became maps and the two-dimensional lines were turned into walls, floors and ceilings that parted homes. Moses' compositions – the urban plan as well as details inside the apartments – were inspired by modernist standards and ideas. Streets were replaced with parks and high-rise buildings with open access galleries were designed (Mumford, 1995).

After a few years, the stories that filled the apartments became darker overtime. The residents started to experience social problems and feelings like isolation and alienation. It is discussible, however, if the modernist architecture either caused or enlarged these struggles. At any rate, the form of the buildings negatively influenced the way residents and visitors experienced Pruitt-Igoe (Comerio, 1981).

The design was developed inside at Moses' office, which was isolated from the lively city streets. Moses could look down on the city, but the importance of observing from below should not be underestimated. It namely could be because of Moses' distance from the place as well as the people that projects like Pruitt-Igoe failed. His ideas which went hand-in-hand with practised ideas of modernism were possibly too abstract, too ideal to let life – as chaotic as we all know it – happen.

In 1972, Pruitt-Igoe was labelled a failed project and got demolished (figure 3), which has been reshown in multiple documentaries, as it marks an impactful moment in the history of urbanism. Charles Jencks, the main definer of postmodern architecture, stated that *"Modern architecture died in St. Louis Missouri on July 15, 1972 at 3.32pm."* (Jencks, 1977, p. 9).

The birth of postmodernism
The 'death of modernism' at Pruitt-Igoe showed that modern architecture can be viewed as a failure, however, it is maybe an event that only symbolically marks the period of change in architecture. The rise of postmodernism was namely (also) connected to the economic crisis of 1973, which influenced employment, production and consumption, and therefore also changed daily life and people's visions. The need for a different approach in urban planning and architecture increased, and postmodernism started to take a form (Punter, 1988).

Figure 7: Les Espaces d'Abraxas (Kronental, 2014).

The postmodernism movement grew from the 1970s onwards, and so grew its audience. Its style is entangled with modernism, and reacts critically on modernist believes. For example, to postmodernists, style is everything, and logic (or modernism) is nothing. Their designs are colourful, playful, and controversial. The movement looked at styles from the past, like the Neoclassic movement, and implemented them in quite bizarre ways (Sutton, 2000).

Table 2: Characteristics of modernism versus postmodernism (Punter, 1988).

Modernism	Postmodernism
Logic	Style
Divorce from tradition	Mining of architectural history
No ornament	'Meaningful' ornament
Simplicity	Complexity
'The Radiant City'	Traditional urban forms
Utopian	Real world

An example of postmodernism is *Les Espaces d'Abraxas*, designed by Ricardo Bofill (figure 7). It was constructed in 1982 in a town near Paris, and is now considered an urban monument. The residential complex consists of three key aspects: *'le palacio', 'le théâtre', and 'l'arc'* (Designboom, 2017). Its clear reference to ancient architecture styles is visible in elements like arches and columns. Moreover, the building as a whole seems to be complex compared to a standardized modern flat.

The developments in film

After *Trip to the Moon* and *Metropolis*, filmmaking developed further into the 20th century. The element of sound, for example, evolved. *Trip to the Moon* and *Metropolis* are silent movies, however, from 1894 onwards, experiments were executed to record sound and moving images in synchronization. The *Kinetoscope* – invented by Thomas Edison – was used as the first tool in attempting to do so. Later on in the 1920s, a disc called the *Vitaphone* made it possible to add sound to films, however, this new equipment was new and therefore expensive. Films like *Don Juan* (1926) and *The Jazz Singer* (1927) nonetheless showed the importance of sound, and it became clear that this element was here to stay. Stepping into the 1940s and 1950s, it was made possible to record sound-on-film (National Science and Media Museum Blog, 2021). With this new

technology, film industries like Hollywood started to focus on delivering a message in their films while entertaining during the interwar period (Chambers et al., 1996).

The Second World War made it more difficult to produce films, however, the films that were made had the power to cross the line between enemies. Moreover, these films were watched by those at home and those at the front, connecting them on another level (Chambers et al., 1996). After the war, filmmakers wanted to represent and comment on the experiences at home and at the front, and to use those memories to provide a guide back to the present. These films about the war became highly popular and powerful. Moreover, the public memory of war in the 20th century is mainly constructed around a produced past in documentaries, feature films and television programs, instead of a remembered past (Chambers et al., 1996).

With the development and increasing popularity of the television, more than 85 percent of all U.S. home had a television by the end of the 1950s. Going to the cinema to see a movie was not as common anymore, since one could now sit comfortably at home while watching a show. Of course, the film industries wanted to change this, since they were making less profit and lost connection to their audience. Hollywood's technique to increase visitors included a new technology called *3D cinema* (Eyman & Giannetti, 1996).

In the 1970s, the political situation in the U. S. became chaotic due to the Vietnam War and the death of Martin Luther King. In the midst of all this violence and despair, the film attendance in American cinema began to rise. The audience as well as the producers were young, and more innovative projects were shown on the screen, which were mainly about love and romance (Eyman & Giannetti, 1996).

Later on in the 1980s, Ronald Reagan – a former movie star – was the President of the U.S., whose conservative ideology dominated during this decade. Mainstream films made in Hollywood reflected his values, like winning, family solidarity, money and nationalism (Eyman & Giannetti, 1996). During this time, one of the most influential science-fiction movies was made, called

Blade Runner (1982) directed by Ridley Scott. The story is an alteration of the book *Do Androids Dream of Electric Sheep?* by Philip K. Dick. The film itself is considered one of the first cyberpunk films. This genre generally illustrates post-industrial dystopias in which there is a conflict in which mega corporations, hackers and AI are involved. The story takes place in the near future, and daily life is modified by technology and innovation (Cruz, 2014).

'The end'
The quote of Miller (2006) at the beginning of this chapter summarizes the aim of this part of the thesis well. It describes how changing spirits of changing ages are the centre part of architecture. Even though Fritz Lang and Ridley Scott were filmmakers and not architects, the same can be said for the film industry, in which they left their marks.

In conclusion, this chapter has set the scene for discussing the case studies *Metropolis* for Chapter 2 and *Blade Runner* for Chapter 3.

Chapter 2: *Metropolis* (1927)

"The Mediator Between Brains and Hands Must Be the Heart!"

(Lang, 1927, 2:57)

Figure 8: Film still from the Tower of Babel (Lang, 1927, 24:31).

Introduction

Metropolis (1927) is set in a futuristic dystopian city of 2030 in which society is divided between the wealthy elite who live in luxurious skyscrapers and the oppressed working class who struggle with their reality underground. This chapter starts with a summary of the story and its specific context. Next, the copied and adapted architectural elements are analysed for cityscape, building and detail.

Summary of the story

In *Metropolis*, Joh Fredersen is the city's master and rules it tyrannically. The narrator of the story is his privileged son named Freder. After an encounter with a saintly figure to the Workers - called Maria - and seeing the conditions of the world underground first-hand, Freder visits his father to ask for help. However, Joh Fredersen has no interest in doing what his son so desires, and is more interested in the secret maps that were found in the Workers' clothes, which reveal the structure of the underground catacombs. There has been explosions in the underground machines, and these maps could be connected to that in Fredersen's eyes. Because his experts failed him, he seeks advice and help from the inventor Rotwang, unaware of his sinister intensions. Rotwang, who was in love with Hel, is bitter due to the fact that Hel married Joh Fredersen and died in childbirth. In the hope to bring her back to life, he made a robot called the Machine Man. When Joh Fredersen and Rotwang find out that Maria summons the Workers after their shifts to preach to them in the underground catacombs, Fredersen demands Rotwang to reconstruct the Machine Man in the likeness of Maria. When this robotic version of Maria speaks to the Workers again, she calls on the Workers to use violence and to kill the machines. In a chaotic riot, they do so, and the underground floods. Amidst this all, the real Maria escapes Rotwang and rescues the children in the underground from the floods together with Freder. In the end, the robotic Maria is burned, and during a fight with Freder in a cathedral, Rotwang falls and dies. The films ends with Freder bridging the gap between his father (the Head) and the Workers (the Hands), which symbolises hope for unity in a fractured society (Lang, 1927).

Specific context

Fritz Lang drew his inspiration for *Metropolis* from the changing world around him. Lang created a world that mirrored the one he was in and exaggerated these feelings and events (Graham, 2016). Lang focussed on industrialisation, urbanisation and socio-political disorder. His ideas about this resulted in a science-fiction film that portrays a dystopian landscape of the future, which was influenced by New York City's skyscrapers. It is the virtual representation of how the present of the early 1900s – filled with both fascination and anxiety for urbanisation and technology – collides with ideas about the future. The theme and motive that drives the story is *"The Mediator Between Brains and Hands Must Be the Heart!"* (Lang, 1927, 2:57).

In the 1920s, Berlin was the capital in Europe of the avant-garde. Expressionism rose from the avant-garde movement before World War I and remained popular in Germany during the Weimar period (Bachmann, 2002). The people were left unsettled and confused after World War I, and in this context, expressionism flourished. This modernist movement focussed on the personal and emotional expression, whereas traditionally, art resembled the natural appearance of the object or organism (Eyman & Giannetti, 1996). Moreover, expressionism reacts on technology and its oppressive and destructive potential (Huyssen, 1981). In most German silent films of the 1920s – and thus also in *Metropolis* – this meant that the created story worlds were built on exaggeration, a dreamlike atmosphere, and a heavy contrast between light and dark (Eyman & Giannetti, 1996).

Copied and adapted architectural elements

In order to discover the influence of the real built environment and ideas about urban planning of the 20th century, the copied and adapted architectural elements in *Metropolis* are analysed in this chapter. Moreover, these elements are also connected to the context, architectural movements, and the development in film as described in chapter 1. The outcome of the structural analysis of the architectural elements cityscape, building and detail is described in the following paragraphs.

Cityscape

Comparison 1

As noted in this Introduction of this thesis, filmmaker Lang

Cityscape

Comparison 1

Figure 9: Film still from Metropolis (Lang, 1927, 18:20).

Figure 10: General view - Downtown Manhattan. (The New York Public Library, 1922).

Comparison 2

Figure 11: Film still from Metropolis (Lang, 1927, 18:36).

Figure 12: The Radiant City by Le Corbusier (A drawing of The Radiant City, n.d.)

Note: there is no visualisation for comparison 3 of the cityscape of Metropolis.

was inspired by his visit to New York City. When he came back from the United States, Lang published *'Was ich in Amerika sah'* [What I saw in America], in which he describes his experience of the city, and Manhattan especially:

"[Where is] the film about one of these Babylons of stone calling themselves American cities? The sight of Neuyork alone should be enough to turn this beacon of beauty into the center of a film... Streets that are shafts full of light, full of turning, swirling, spinning light that is like a testimony to happy life. And above them, sky-high over the cars and trams appear towers in blue and gold, in white and purple, torn by spotlights from the dark of night. Advertisements reach even higher, up to the stars, topping even their light and brightness, alive in ever different variations... Neuyork by day is the definition of sobriety, nevertheless fascinating by its movement. Neuyork by night is of such beauty that, if one experienced nothing but the arrival in the harbor at night, one would still have an unforgettable impression for one's whole life." (Lang, 1924, unpaginated).

In his description, one can note in his thoughts that his visit sparked something inside of him. He was both fascinated and fearful of the city, as he realized that there was both a light and dark side to it. A city like New York would therefore be the perfect setting for a film about urbanisation and industrialisation.

Three years after his visit, *Metropolis* was born. In general, the overall look of the cityscape in *Metropolis* is extreme, expressive, and an exaggeration of the skyscrapers that were built in the beginning of the 20th century in Manhattan. Enormous skyscrapers almost reach the clouds as multiple layers of traffic and infrastructure are built on top of each other (Bachmann, 2002).

Comparison 2
In theory, most architectural elements in *Metropolis* were based on planning and urban design of the real built environment, however, some were also grounded in ideas about architecture which were never executed. The cityscape of the film was inspired by modernist ideas about utopia's and the future (Golding, 2019). Staiger (1988) also finds connections between modernist utopia's and film in the 1920s and 1930s, and in *Metropolis* specifically. In the 1920s, Le Corbusier proposed *The Radiant City* (figure 12), in which skyscrapers were dominant and connected to highways, enclosed by parks. This radical plan was never realised in the real built environment, however, it was often used as the foundation for science-fiction films in the early 1900s (Rowley, 2006), which is also found within *Metropolis*.

The car had a prominent place in the Radiant

City. The same can be said about *Metropolis*, as visible in figure 11. Multiple highways on top of each other are constructed in this city of the future, and the roads are always cramped with traffic. Moreover, the rigid high-rise of *Metropolis* are compatible with The Radiant City. The elite resides above ground, while the Workers handle heavy machinery, and perform backbreaking labour. This visualized hierarchy in *Metropolis* is similar to one accepted by Le Corbusier, and his Radiant City, in which the planners look down on the world they created (Staiger, 1988).

Comparison 3
The film was made during the Weimar-period in Berlin (1918-1933), when the mass lived in poverty, was unemployed and were starving. Therefore, Berlin was called the *'Babylon of Europe'*. However, the elite kept existing, and thus there was a substantial wealth gap in society. This theme is expended upon in *Metropolis* (McAuley, 2015), and visible in its architecture. In the film, the intense division between the architectural low and high is a direct reference to the division between the lower and higher class. The Workers who built the city and work at the machines are placed underground to keep them – quite literally – downtrodden. Moreover, by being underground, the Workers can literally rise and show that the city that was created is actually fragile (Graham, 2016).

Building

Comparison 1
In *Metropolis*, the scale of the skyscrapers and the complexness of the underground tunnels and workspaces are an exaggeration of the reality of the 1920s. The use of steel and concrete as construction materials mirrors the new ways in which buildings could be shaped and constructed in the beginning of the 20th century. Steel, with its strength and flexibility, represents the technological improvements that influenced urban development. Concrete symbolizes efficiency and mass production (Sutton, 2000).

With these new developments in building materials and ways, the labour aspect cannot be left out of the picture. In the underground world of *Metropolis*,

Building

Comparison 1

Figure 13: Film still from Metropolis (Lang, 1927, 14:05).

Figure 14: A factory in New York City, called the Sprague Electric Company (The New York Public Library, 1898).

Comparison 2

Figure 15: Film still from Metropolis (Lang, 1927, 38:21).

Figure 16: Trinity Church in New York City, overshadowed by skyscrapers (The New York Public Library, 1898 - 1931).
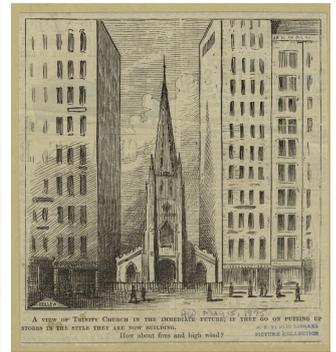

Figure 17: A drawing of a possible future of the surroundings of the Trinity Church in New York (The New York Public Library, 1875-05-15).

Detail

Comparison 1

Figure 18: Film still from Metropolis (Lang, 1927, 1:29:25).

Figure 19: An American Waltham watch factory during the late 1800s (Webster, n.d.).

enormous machines are embedded in the architecture of the world under the ground, as visible in figure 13. It stresses the central place of technology and industries, and its dehumanizing effect. During the Second Industrial Revolution in the 20th century, these themes were central to debates about urban planning and labour rights. The working conditions in factories (figure 14) were extreme and unhealthy, to say the least (Menga, 2022). However, the employees needed the minimal wage to support themselves and their family, which *Metropolis* acknowledged and realized: *"Who told you to attack the machines, you fools? Without them, you'll all die!"* (Lang, 1927, 2:08:54)

Comparison 2
Metropolis' cityscape is partly based on new ideas of the early 1900s about urban planning, like The Radiant City, and on new building materials, like steel and concrete. However, Gothic architectural and social elements are also embedded in the film. Rotwang's house, for example, has Gothic features (as seen in figure 15), and the final scene is shot at an immense cathedral. Moreover, the film extensively incorporated biblical sources in several key set-pieces. For instance, Maria – also an obvious reference – uses the story of the *Tower of Babel* to stress the dissonance between the Brains behind a vision, and the Workers who execute the plan. Furthermore, the Tower of Babel is also used as a reference of the building in the centre of the city, from where Joh Fredersen rules the city (figure 8).

In this comparison, the focus lies on Rotwang's home (figure 15). His medieval house with a sharply peaked roof like a Gothic arch stands in the middle of the city, surrounded by enormous skyscrapers. Similarities between Rotwang's house, which stands out between high skyscrapers, and the Trinity Church in New York City can be found. Figure 16 and 17 illustrate that the surroundings of the Trinity Church have drastically changed over the years. The Gothic church is an odd appearance within its new setting in the beginning of the 20th century, and is also enclosed by skyscrapers that reach for the clouds. A possible future scenario is sketched in figure 17, in which the artist wonders if the situation would become even more extreme, so that the Gothic church is literally surrounded by modern architecture.

The religious references and Gothic architectural elements symbolize that *Metropolis* is not a new, modern city: it rather implies that it has multiple layers in which the past is embedded. Even within the modern, the Gothic exists in its core. Rotwang's house in an imaginary world and the Trinity Church in the real world are literal examples of this.

In *Metropolis*, the collision between the modernity and the Gothic refers to the conflict between the master and the Workers – or as the film phrases it: the Brains and the Hands (Gunning, 2000).

Detail

Comparison 1
The expressionism movement has had a considerable impact on the interior and details of the spaces in *Metropolis*. The bedroom of Freder and the underground factories are examples of this, where expressionist elements stress contrasts between light and shadow, and order and chaos. Lang in particular was known for creating striking contrasts between light and shadow in his films, and was therefore called "the Master of Darkness" (Wolfe, 2023).

The expressionistic elements can also be found in the story world of *Metropolis*. Door handles, lamps, and clocks (figure 18) were designed in this particular style that ruled the artistic site in Germany in the early 1900s (Eyman & Giannetti, 1996). German expressionism criticized the impact of technology, and its destructive characteristic (Huyssen, 1981). The clock, for example, displays that the two classes - the Elite and the Workers - exist in two different 'times'. The relatively bigger clock at the bottom refers to the 10 hour work shifts at the machines for the Workers, denying the natural day and night. Placed at the top, the 24-hours clock is for the few who are fortunate to be a part of the Elite. Moreover, the Workers have a greater mass, and therefore, the bottom clock is relatively larger in size. The clock depicts how Metropolis can be an utopia for a few on the top, and a dystopian for those at the bottom (Kerr, 2008).

This aspect of the film shows not only the influence of German expressionism, but also the role of social class. Clocks and (pocket) watches are products that are

manufactured in factories by labourers for a minimum wage, so that the people who can afford them can posses time. The watch factory of figure 19 illustrates this complex interplay between labour, wealth and time.

Conclusion

This chapter aimed to identify the architectural elements in *Metropolis* that were inspired by real architecture and ideas about architecture of the early 1900s. By analysing the film on three scales – cityscape, building, and detail – this chapter has shown how *Metropolis* mirrors and critically comments on changes in society and urban planning of the beginning of the 20th century, even though the story is set in the distant future. Lang was inspired by the life and architecture of New York City, and within an alternate context, complex topics like urbanisation and industrialisation were possible to visualize through exaggeration and extremeness (Bachmann, 2002). Gothic elements in architecture and the storyline express the conflict between the Gothic and the modern (Gunning, 2000). Details in *Metropolis*, such as the two clocks, show the influence of German expressionism (Kerr, 2008) and the difference between the social classes.

Chapter 3: *Blade Runner* (1982)

*"I've seen things you people wouldn't believe. Attack ships on fire off the shoulder of Orion.
I watched C-beams glitter in the dark near the Tannhauser gate. All those moments will be
lost in time... like tears in rain... Time to die."*
(Scott, 1982, 1:46:19)

Figure 20: Film still from Blade Runner (Scott, 1982, 10:11).

Introduction

A fear of overcrowding, pollution, technology, nuclear weapons and crime that arose in the late 1900s was highlighted in this fictional nightmare called *Blade Runner* (1982). The cityscape consisted of high-rise buildings, a combination of various architectural styles, heavy industry buildings having a prominent place in the urban fabric, neon advertisement, smog and overcrowding. This chapter starts with a summary of the story and its specific context. Next, the copied and adapted architectural elements are analysed for cityscape, building and detail.

Summary of the story

The film is set in Los Angeles, 2019, and follows the life of former police officer Rick Deckard, who is obliged back into duty by his former supervisor Bryant to track down and 'retire' four illegal Replicants: Leon, Roy, Zhora and Pris. These Replicants were designed to copy human beings in every way, however, they do not have any emotions. After a few years they might develop their own emotions, but in theory, they only can live for 4 years. The Replicants were used as slaves in colonisation of other planets, and Leon, Roy, Zhora and Pris escaped this fate. Deckard, who becomes one of the Blade Runners again after his conversation with Bryant, meets with the owner of the Tyrell company that creates Replicants. Eldon Tyrell wants to see a performance of the Voight-Kampff test on his assistant Rachael. This test is performed by Blade Runners, which can distinguish Replicants from humans based on their emotional responses to questions. After the test, Deckard concludes in private to Tyrell that Rachael is a Replicant who believes she is human. Then, Tyrell explains that she is an experiment who has been given memories which are not hers to provide an 'emotional cushion' and so she does not know about her true nature. Later on, Rachael finds out about this, and gets emotional since it is hard for her to understand the lies that she has been told.

Meanwhile, Replicants Roy and Leon break into the laboratory of a man who designs and makes the eyes for the Replicants, and they learn about J.F. Sebastian who might know the answers to their questions about themselves as Replicants. Replicant Pris then manipulates Sebastian to take her with him to his house.

Deckard continues his search and ends up at a strip club where Zhora works. After a confrontation and

chase, Deckard shoots at Zhora multiple times. Bryant arrives to look at the body, and he orders Deckard to retire Rachael as well, who appeared to be disappeared from Tyrell Corporation. Deckard then sees her in a crowd, but he suddenly gets attacked by Leon. The fight ends with Rachael shooting Leon, and so she saves Deckard's life.

At Sebastian's apartment, Roy arrives and tells her that the other two Replicants are dead. Sebastian notes that Pris and Roy are not humans but Replicants, and live therefore not longer than four years. Sebastian himself has a similar problem: because of a genetic premature aging disorder, his life will be cut short as well. Roy uses Sebastian to get entrance to Tyrell's penthouse, where he confronts him with the fact that he desires more life from his creator. Tyrell makes clear that this is impossible, which makes Roy kill Tyrell and later on Sebastian too.

Back at Sebastian's apartment, Pris and Deckard end up fighting, and Deckard kills her. Roy returns and notes that his body begins to fail as the end of his lifespan nears. After an intense chase, Roy lets Deckard live, as he laments that his memories *"will be lost in time, like tears in the rain."* (1:46:19). Deckard returns to his apartment to retrieve Rachael, and they leave together (Scott, 1982).

Specific context

The cinematic architecture in *Blade Runner* broke free from the neat lines of existing modernist cities (Rowley, 2006). However, there are different perspectives on whether the film has modernist or postmodernist influences. Since postmodernism was rising and quite new, the line between the two movements became blurry. Voices like Rowley (2006) state that *Blade Runner* is nor a modern, nor a postmodern visualisation, but a modernist way of showing what to avoid. This is in contradiction with Bruno (1987), who states that *Blade Runner* is a postmodernist creation. This difference is expanded upon in the following paragraph.

Copied and adapted architectural elements

In order to discover the influence of the real built environment and ideas about urban planning of the 20th century, the copied and adapted architectural elements in *Blade Runner* are analysed in this chapter. Moreover, these elements are also connected to the context, architectural movements, and the development in film as described in chapter 1. The outcome of the structural

Cityscape

Comparison 1

Figure 21: Film still from Blade Runner (Scott, 1982, 3:24).

Figure 22: View on factories from a hill in Solvary (Detroit Publishing Co, Between 1890 and 1901).

Comparison 2

Figure 23: Film still from Blade Runner (Scott, 1982, 45:59).

Figure 24: West Kowloon (Hong Kong) Cultural District in 1970 (Hong Kong's neon signs, 1970).

Comparison 3

Figure 25: Film still from Blade Runner (Scott, 1982, 36:55).

Figure 26: The Radiant City by Le Corbusier (A drawing of The Radiant City, n.d.)

analysis of the architectural elements cityscape, building and detail is described in the following paragraphs.

Cityscape

Comparison 1
The overall atmosphere on the ground is misty, rainy and mainly uncomfortable. The cityscape of *Blade Runner* does not consist of hyper-mechanized and ultramodern architecture. It rather portrays the post-industrial decay of its city due to the dark side of technology (Bruno, 1987). The first image, for example, presented when viewing *Blade Runner*, is a shot from a bird's eye perspective, seeing the city from above (figure 21). It portrays high skyscrapers at night, and some of the building tops blast fire into the air, suggesting that the future world of 2019 returned to its primitive and industrial state (Cruz, 2014). When this first image of *Blade Runner* (figure 21) and an image of an industrial setting of 1890-1901 (figure 22) are put next to each other, one can see the similarities.

Comparison 2
In the film, the city is called 'Los Angeles', and refers to L.A. in the 'real world', however, the depicted city also lent some elements from other cities like New York, Hong Kong and Tokyo. The sounds, for example, are not only theatrical or in the English language: Asian languages play a prominent role. Moreover, the setting of the film portrays Asian characters on the streets and at the shops, and even the enormous electronic billboards on the side of several buildings show a geisha (Cruz, 2014). Figure 23, moreover, shows Asian neon signs, and these were popular from the 1950s to the 1980s in Asian cities like Hong Kong (figure 24). This dominance by Asian speaking citizens is also visible in the fact that immigrants are settled in the city centre, repressing the natives towards the suburbs. Bruno (1987, p. 66) calls the Los Angeles of *Blade Runner* *"China(in)town"*. One may read this Asian predominance as Ridley Scott suggesting a future in which the Western world fell, and Eastern culture rose due to overpopulation (Cruz, 2014).

Comparison 3
Blade Runner was created in a period when postmodernism was quite new, and ideas of utopian visions of modernism were still relevant. When looking at Le Corbusier's Radiant City again, it is notable how different the two imaginary worlds are. The story world of *Blade Runner* is messy, uncomfortable, and it shows post-industrial decay instead of progression, as shown in figure 25. The Radiant City (figure 26), however, is an utopia above all, and shows rigid shapes, accompanied by clear infrastructure. According to Rowley (2006, p. 207), *Blade Runner*'s cityscape is the *"flipside"* of a modernist utopian world like Le Corbusier's. He dives deeper into this observation, and states that *Blade Runner* is not so much a postmodern film, because it rather displays the opposite of an utopian vision of modernism architecture and urban planning.

Building

Comparison 1
In the cityscape of *Blade Runner*, overcrowded and highly populated areas adjoin abandoned buildings and neighbourhoods in decay. The building where J.F. Sebastian lives was once majestic, however, it is now decayed. Rain leaking through parts of the roof completes the atmosphere (Bruno, 1987). This building is an actual existing building in downtown Los Angeles called the *Bradbury Building*. The Bradbury Building is an example of the use of architecture from the real built environment, which was adapted to the atmosphere of the film. It was built in 1983 in the Italian Renaissance Revival-style (The Los Angeles Chapter of The American Institute of Architects, n.d.). As figure 28 shows, the building itself is full of natural light and it is well maintained, but in *Blade Runner* (figure 27), the building is portrayed as abandoned. It shows that the portrayed city has multiple layers in which history is stored, and that the city is not hyper-modern and not detached from its past.

Detail

Comparison 1
In Deckard's apartment are references findable that show the acknowledgement of the past and of memory. The walls of his apartment exist out of individual stones, as shown in figure 29, which are reminiscent of an ancient Mayan palace. In other places in the story world, the same kind of approach of architecture is visible. The interior of the Tyrell offices are not high-tech, but would

Building

Comparison 1

Figure 27: Film still from Blade Runner (Scott, 1982, 1:30:11).

Figure 28: The interior of the Bradbury Building in L.A. (Nagel Photography, n.d.)

Detail

Comparison 1

Figure 29: Film still from Blade Runner (Scott, 1982, 34:32).

Figure 30: A wall at Les Espaces d'Abraxas (Zandri, n.d.).

rather be classified as Egyptian, for example. The roof of the place where Deckard performs the test on Rachael is supported by vast Roman and Greek columns (Bruno, 1987). These references to ancient styles and movements are a typical characteristic of postmodernism (Sutton, 2000). An example of this style in architecture, is Les Espaces d'Abraxas, as seen in Chapter 1, and here in figure 30. In this interior shot of a wall is a pattern of massive blocks visible, which refers to ancient styles and movements. In a more detailed and specific way, the same idea is applied in Deckard's kitchen in figure 29.

Conclusion

This chapter aimed to identify the architectural elements in *Blade Runner* that were inspired by real architecture and ideas about architecture of the late 1900s. By analysing the film on three scales – cityscape, building, and details – this chapter has shown how *Blade Runner* mirrors and critically comments on changes in society and urban planning of the end of the 20th century, even though the story is set in the distant future. The atmosphere of the film is dark, rainy, and shows post-industrial decay in the future, instead of improvement (Cruz, 2014). Moreover, Scott implies that, in the future, Asian cultures will play a prominent role in life on the streets and in the city (Cruz, 2014). In the film, there are several architectural elements that show influence from postmodernism, like the ancient-looking stones in Deckard's apartment (Bruno, 1987). However, the overall look and feel of *Blade Runner* can be interpreted as less of a postmodern world, and more of an opposite world of a modernist utopian like The Radiant City (Rowley, 2006).

Chapter 4: Conclusion

"This nightmare - the one reflected in various registers in the science-fiction films - is too close to our reality."

(Sontag, 1965, p.42)

Figure 31: The Broken Mirror *by artist Ron Blumberg (1936).*

This thesis aimed to find an answer to the following research question: *How did the real Western built environment influence cinematic architecture in the science-fiction films* Metropolis *(1927) and* Blade Runner *(1982), revealing the real architectural elements that were either copied or adapted into imaginary worlds throughout the 20th century?*

This research is based on a literature review and a methodology, which is applied on two case studies - *Metropolis* and *Blade Runner* - as presented in the Introduction. Chapter 1 discussed the general information of changes in society, movements in architecture, and developments in the film industry in the 20th century. Throughout this thesis, these three interconnected elements are the pillars of the analysis.

In Chapter 2, *Metropolis* is examined on three different architectural scale levels: cityscape, building and detail. In this analysis, several links were made between ideas of the early 1900s and certain architectural elements in the film. For example, the film reflects the urban landscape of New York City in the 1920s, and exaggerated this context to illustrate urbanisation and industrialisation (Bachmann, 2002). Moreover, the conflict between modernity and tradition is highlighted through the use of enormous modern skyscrapers and Gothic architecture (Gunning, 2000), while details, such as the two clocks, show the influence of German expressionism (Kerr, 2008) and the difference between the social classes.

In Chapter 3, the same methodology is applied to analyse *Blade Runner*. Despite its futuristic setting, the film depicts a post-industrial and decaying urban landscape, where Asian cultures dominate (Cruz, 2014). On a smaller scale, influences from postmodernism are visible (Bruno, 1987) in the stone wall of Deckard's apartment.

Metropolis and *Blade Runner* both portray cities of the future, however, the films are rather about the realities of the 20th century. Both films comment on the fears that were present throughout this period, holding up a mirror to its viewers. In both films, existing architectural elements are copied, and adapted in an exaggerated and enlarged way, to present an dystopian image of a future society. Cinematic architecture is used in the two films to portray a critical view on society and technology, and show a possible future scenario.

Even though *Metropolis* and *Blade Runner* both apply this method, there is also an aspect that differs them. *Metropolis* rewards the viewer with a positive ending in which the Brains and the Hands come together, whereas *Blade Runner* holds onto its dystopian environment.

Metropolis and *Blade Runner* are still relevant to this day, since contemporary issues such as urbanisation only have increased, and thus, we can still learn from them. Further research would therefore raise awareness, and have impact. A suggestion for future investigation is to examine if certain elements of these story worlds have become reality. Moreover, to examine the influence of *Metropolis* and *Blade Runner* on architecture and planning can also provide new insights.

Through an exploration of the space between real and reel, this thesis underscores the influence of architecture and urban planning on cinematic storytelling throughout the 20th century. The analysis of the films *Metropolis* and *Blade Runner* reveal how embedded both urban landscapes are in the societal and technological changes, bridging the gap between reality and imagination.

Bibliography

Andersen, T. (1975). *Eadweard Muybridge Zoopraxographer* (Documentary Film).

Bachmann, H. (2002). Introduction. In Minden, M. & Bachmann, H. (Ed), *Fritz Lang's Metropolis: Cinematic visions of technology and fear* (3-46). Camden House.

Barthes, R. (1981). *Camera Lucida* (R. Howard, Trans.). Vintage Classics.

BBC Newsround (2019). *What was the Cold War?*. BBC. Retrieved on the 7th of April 2024, from https://www.bbc.co.uk/newsround/47122488

Bruno, G. (1987). *Ramble City: Postmodernism and "Blade Runner." October, 41*, 61–74. https://doi.org/10.2307/778330

Chambers, J. W., Culbert, D. H., & Culbert, D. (Eds.). (1996). *World War II, film, and history.* Oxford University Press, USA.

Comerio, M. C. (1981). Pruitt Igoe and other Stories. *Journal of Architectural Education, 34*(4), 26–31. https://doi.org/10.1080/10464883.1981.10758667

Cruz, D. T. (2014). Postmodern metanarratives. In *Palgrave Macmillan UK eBooks.* https://doi.org/10.1057/9781137439734

Designboom. (2017). *tour ricardo bofill's monumental postmodern housing complex near paris.* Designboom | Architecture & Design Magazine. Retrieved on the 3rd of April 2024, from https://www.designboom.com/architecture/ricardo-bofill-postmodern-housing-complex-paris-les-espaces-dabraxas-france-03-07-2017/

Eyman, S. & Giannetti, L. (1996). *Flashback: A Brief History of Film.* Prentice-Hall.

Fritzsche, P. (2015). The City and Urban Life. In Saler, M. (Ed.), *The Fin-de-Siècle World* (29-44). Routledge.

Golding, D. (2019). The darker side of Fritz Lang's *Metropolis*: coloniality in modernist cinema. *Postcolonial Studies, 22*(3), 303-324, DOI: 10.1080/13688790.2019.1627855

Graham, S. (2016). Vertical noir. *City: Analysis of Urban Trends, 20*(3), 389–406. https://doi.org/10.1080/13604813.2016.1170489

Gunning, T. (2000). *The Films of Fritz Lang: Allegories of Vision and Modernity.* Bloomsbury Publishing.

Gunning, T. (2015). The Cinema. In Saler, M. (Ed.), *The Fin-de-Siècle World* (661-676). Routledge.

Huyssen, A. (1981). The Vamp and the Machine: Technology and Sexuality in Fritz Lang's Metropolis. *New German Critique, 24*(25), 221–237. https://doi.org/10.2307/488052

Jencks, C. (1977). *The Language of Post-modern Architecture.* Rizzoli International Publications.

Kerr, J. F. (2008). The Cultural Architecture of Metropolis. *Screen Education,* (50), 105–110. https://search.informit.org/doi/10.3316/informit.516313354587753

Lang, F. (1924). *Was ich in Amerika sah – Neuyork und Los Angeles.* Film-Kurier.

Lang, F. (Director). (1927). *Metropolis* [Film]. UFA.

Mambrol, N. (2020). *Avant-Garde's Relation to Modernist Thought.* Literary Theory And Criticism. https://literariness.org/2016/03/26/avant-gardes-relation-to-modernist-thought/

Massey, G. (2015). *Ways of social change: Making sense of modern times.* Sage Publications.

McAuley, A. (2015). Savior of the Working Man: Promethean Allusions in Fritz Lang's *Metropolis* (1927). In: Cyrino, M.S., Safran, M.E. (eds) Classical Myth on Screen. Palgrave Macmillan, New York. https://doi.org/10.1057/9781137486035_10

Menga, L. (2022). Industrial Revolution and the Birth Of Modern Architecture. *Vision International Refereed Scientific Journal, 7*(1), 105–123. https://doi.org/10.55843/ivisum2271105m

Michale, M. S. (2015). France. In Saler, M. (Ed.), *The Fin-de-Siècle World* (93-116). Routledge.

Miller, L. B. (Ed.). (2006). *Housing and dwelling: Perspectives on modern domestic architecture.* Taylor & Francis Group.

Milner, A. (2004). Darker cities. *International Journal Of Cultural Studies, 7*(3), 259–279. https://doi.
org/10.1177/1367877904046303

Moreira, S. (2023, September 22). *The 5 Points of Modern architecture in Contemporary Projects.* ArchDaily. https://www.archdaily.
com/948273/the-5-points-of-modern-architecture-in-contemporary-projects

Mousoutzanis, A. (2013). The Science Fiction Film. In Hubble, N., & Mousoutzanis, A. (Ed.), *The Science Fiction Handbook* (143-166).
A&C Black.

Mumford, E. (1995). The "tower in a park" in America: Theory and practice, 1920–1960. *Planning Perspectives, 10*(1), 17–41. https://
doi.org/10.1080/02665439508725811

National Science and Media Museum blog. (2021, September 13). *A brief history of sound in film.* National Science and Media
Museum Blog. https://blog.scienceandmediamuseum.org.uk/brief-history-of-sound-in-film/#:~:text=A%20
brief%20history%20of%20sound%20in%20film%201,sound%20. . .%205%205%20Dolby%20and%20the%20future%20

Punter, J. (1988). Post-modernism. *Planning Practice and Research, 2*(4), 22-28. DOI: 10.1080/02697458808722694

Rowe, H. A. (2011). "The Rise and Fall of Modernist Architecture." *Inquiries Journal/Student Pulse, 3*(04). Retrieved from http://www.
inquiriesjournal.com/a?id=1687

Rowley, S. (2006). *False LA: Blade Runner and The Nightmare City.* In The Blade Runner Experience: The Legacy of a Science Fiction
Classic (pp. 203-212). New York Chichester, West Sussex: Columbia University Press.
https://doi.org/10.7312/broo476431-015

Scott, R. (Director). (1982). *Blade Runner* [Film]. Warner Bros.

Sontag, S. (1965). *The Imagination of Disaster.* Commentary, 40, 42. https://www.proquest.com/magazines/imagination-disaster/
docview/1290185503/se-2

Staiger, J. (1988). Future noir: contemporary representations of visionary cities. *East-West Film Journal, 3*(1), 20-44.

Sutton, I. (2000). *Western Architecture: A Survey From Ancient Greece to the Present.* Thames & Hudson.

The Los Angeles Chapter of The American Institute of Architects. (n.d.). *The Bradbury Building.* Retrieved on the 1st of April 2024,
from https://web.archive.org/web/20140112063102/http://www.aialosangeles.org/map-downtown-landmarks/the-
bradbury-building#.UtlrMrTgxvA#.UtlrMrTgxvA

Tyrnauer, M. (Director). (2016). *Citizen Jane: Battle for the City* [Documentary]. IFC Films

Wolfe, S. (2023). *Art influences in Fritz Lang's Metropolis.* Artland Magazine. https://magazine.artland.com/fritz-langs-metropolis-
how-the-iconic-silent-film-took-inspiration-from-art-movements/

Images and illustrations

[A drawing of the Radiant City]. (n.d.). https://www.archdaily.com/411878/ad-classics-ville-radieuse-le-corbusier/51fadfbbe8e44e
a2b0000010-ad-classics-ville-radieuse-le-corbusier-image?next_project=no

Blumberg, R. (1936). *The Broken Mirror* [Painting]. Trigg Ison Fine Art, Hollywood, CA, United States. https://www.triggison.com/
product-page/ron-blumberg-4

Detroit Publishing Co, *P. Solvay Process Co.'s works, Syracuse i.e. Solvary.* Solvay United States New York State New York, None.
[Between 1890 and 1901] [Photograph] Retrieved from the Library of Congress, https://www.loc.gov/
item/2016801688/.

[Hong Kong's neon signs: Kowloon in 1970]. (1970). https://artsandculture.google.com/story/ogWRMXUKqUGzJg

[Image of a *Phenakistiscope*] (n.d.). http://veravague.blogspot.com/2013/10/the-phenakistoscope.html

[Image of a *Phenakistiscope* and how it was used] (n.d.). http://veravague.blogspot.com/2013/10/the-phenakistoscope.html

Kronental, L. (2014). *Les Espaces d'Abraxas* [Photograph]. ArchDaily. Retrieved on the 3rd of April 2024, from https://www.archdaily.
com/774578/a-utopian-dream-stood-still-ricardo-bofills-postmodern-parisian-housing-estate-of-noisy-le-grand

Lang, F. (Director). (1927). *Metropolis* [Film]. UFA.

Nagel Photography (n.d.). *The Bradbury Building*. Retrieved April 11th, 2024, from https://la.curbed.com/2017/10/11/16461516/bradbury-building-downtown-occult-history

[Photograph of Villa Savoye]. (n.d.). https://www.phaidon.com/agenda/architecture/articles/2019/february/04/le-corbusiers-grand-designs-villa-savoye/

Scott, R. (Director). (1982). *Blade Runner* [Film]. Warner Bros.

The New York Public Library. (1875-05-15). *A view of Trinity Church in the immediate future, if they go on putting up stores in the style they are now building.* Retrieved from https://digitalcollections.nypl.org/items/510d47e1-10ab-a3d9-e040-e00a18064a99

The New York Public Library. (1898). *Sprague Electric Company.* Retrieved from https://digitalcollections.nypl.org/items/510d47e3-d9ea-a3d9-e040-e00a18064a99

The New York Public Library. (1898 - 1931). *Skyscrapers overshadowing Trinity Church, New York, N. Y.* Retrieved from https://digitalcollections.nypl.org/items/510d47da-88e0-a3d9-e040-e00a18064a99

The New York Public Library. (1922). *General view - Downtown Manhattan - [View of skyline from Manhattan Bridge.]* Retrieved from https://digitalcollections.nypl.org/items/510d47dd-8baa-a3d9-e040-e00a18064a99

TheGuardian. (2020, January 6). *Pruitt-Igoe: The failed public housing project and symbol of a dysfunctional urban abyss* | Milwaukee Independent. Milwaukee Independent. https://www.milwaukeeindependent.com/syndicated/pruitt-igoe-the-failed-public-housing-project-and-symbol-of-a-dysfunctional-urban-abyss/

Webster, W. A. (n.d.). *An American Waltham Watch Factory* [Photograph]. SJIX Watches. https://watchesbysjx.com/2020/07/time-consciousness-and-discipline-industrial-revolution.html

Zandri, L. (n.d.). *Les Espaces d'Abraxas Interior* [Photograph]. Divisare. https://divisare.com/projects/385814-ricardo-bofill-taller-de-arquitectura-lorenzo-zandri-les-espaces-d-abraxas